ADULT LEARNING IN ONLINE EDUCATIVE SPACES:

A CONSTRUCTIVE-DEVELOPMENTAL PERSPECTIVE

by

ALEXANDRA BOWEN COX

(Under the Direction of Aliki Nicolaides, Ed.D.)

ABSTRACT

Online learning is swiftly transforming higher education and placing novel demands on adult learners. Adults are forced to navigate new territories in the ways they self-direct their learning and self-reflect on their relationships with technology, particularly through the alone/together paradox (Turkle, 2011) of technical connectedness. While the literature concerning online learning is vast, missing is the constructive-developmental perspective (Kegan, 1982, 1994) on learning with and through technology. The incongruence between the demands of online learning and the cognitive and reflexive capacities of most adult learners poses an exigent problem.

Using data from in-depth, qualitative interviews and polarity maps with seven graduate students spanning socialized and self-authored ways of knowing, this study sought to understand how adults construct meaning, develop, and grow within the context of an online, structured, educative space. Three areas of inquiry guided this study: (1) How does an adult's developmental stage, or way of knowing, shape his or her online learning experience? (2) How do adults at varying developmental stages describe and understand the alone/together paradox in the online learning environment? (3) How, if at

all, may an online, structured, educative space foster developmental shifts that will help adults meet the unique demands of online learning?

The findings of this study describe how developmental capacities influence adults' online learning experiences and their understandings of the alone/together paradox. The findings also describe how the online environment acts as a holding environment for adults at the socialized and self-authored stages of development.

These findings suggest that the online learning environment is a catalyst for growth and development, for those who are ready, by virtue of manifesting the alone/together paradox. This study also discusses growing edges for socialized and self-authored knowers in the online environment and suggests developmentally diverse online practices to engage adults in the complexity of the alone/together paradox.

INDEX WORDS: Online learning, adult learning, constructive-developmental theory, alone together paradox, polarity mapping, subject object interview, transformative learning, generative learning

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DEDICATION

For Dad, who is always with me

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In the midst of data analysis, in some of the deepest confusion and despair I have ever felt, I (only slightly) joked to my husband, Carey, "We are born alone, we die alone…and we write alone." However, after the mental and emotional fog cleared a bit, and I gained a little distance from that special state only qualitative researchers may know, I remembered that I had many, many generous souls holding me, helping me, and supporting me. I am very appreciative of those who made sure I didn't, in fact, have to write this alone.

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CHAPTER 1

INTRODUCTION

President John Hennessy of Stanford warns "there's a tsunami coming, [but] I can't tell you exactly how it's going to break" (as quoted in Bowen, 2013, p. 46). The imminent tsunami to which Hennessy refers is online education and the potential game-changing effects it holds for higher education. William G. Bowen (2013), president emeritus of Princeton University and the Andrew W. Mellon Foundation, agrees and is "convinced that online learning *could* be truly transformative" (p. 46) to post-secondary education. The certainty with which these leaders speak about a sea change in higher education is juxtaposed with the degree of uncertainty they convey about the specifics of this change. Experimentation and exigency characterize the current conversation around virtual learning in the post-secondary environment. The break-neck speed at which new technology is emerging, along with demands for education that is convenient, affordable, and accessible, puts pressure on institutions to act quickly in order to stay relevant, often with little opportunity to reflect or resist. Many colleges and universities are rapidly adopting varying forms of virtual and online learning in hopes that it might be a technological panacea to the social, economic, and political forces currently affecting higher education.

Context

While the demand for a college-educated workforce rises, the cost of a college education also rises, becoming an overwhelming obstacle for many who cannot afford the

expense of an American higher education. Only three percent of the students at the top 146 colleges in the United States are from families in the bottom quarter of household incomes, and as of 2012, student-loan debt topped $900 billion (Stengal, 2012). Universities are also feeling the economic pressure to remain financially viable. For decades, the price of a college education has risen faster than the rate of inflation, also known as "cost disease" of higher education (Bowen, 1976; Middaugh, Graham, & Shahid, 2003; Baum, Kurose, & McPherson, 2012). At technology-intensive research universities like the Massachusetts Institute of Technology, the cost to educate an undergraduate is three times as much as the university receives in net tuition—that is, the tuition the university receives after providing for financial aid (Reif, 2013). Adding to the bleak financial outlook for universities is the decline in their governmental support. Between 2008 and 2012, state funding for post-secondary institutions declined by 28 percent (Gordon, 2013).

In these times of economic and sociopolitical crises, many have questioned the relevancy and sustainability of the higher education system in its current manifestation. Bowen (2013) argues "universities do have to become more business-like in relevant respects at the same time that they have to retain their basic commitments to academic values" (p. 10). This tension between sustainability and a commitment to traditional academic values is conceptualized among college and university presidents as "the iron triangle" (Immerwahr, Johnson, & Gasbarra, 2008).

The iron triangle describes three factors of higher education that are linked in a reciprocal relationship, such that a change in one factor would inevitably affect the other two. These three factors are (1) the increasing cost of higher education, (2) the need to

maintain and improve quality, and (3) the challenge of providing access to new generations of students. In a 2008 study by the National Center for Public Policy and Higher Education and Public Agenda, more than 30 college presidents from all sectors of higher education characterized cost, quality, and access as the three main goals—and challenges—of providing an American education (Immerwahr, Johnson, & Gasbarra, 2008). Yet in the current context, with costs rising and access decreasing, the delicate balance of the iron triangle is in jeopardy. As one president bluntly stated, "One way to deal with those [budget] crises is to sacrifice quality, but ultimately you end up competing with the University of Phoenix" (Immerwahr, Johnson, & Gasbarra, 2008, p. 10). Another president addressed the issue of access by explaining, "At the end of the day, we hear from our legislature, 'Why don't you just take more students and have bigger classes?' That does add capacity, but it erodes the quality of the education" (Immerwahr, Johnson, & Gasbarra, 2008, pp. 10-11). The issue of the quality of instruction and learning, a hallmark of traditional academic values, is particularly highlighted when considered in relation to the current forces influencing cost and access. With the mounting economic and sociopolitical challenges characterizing the current context of higher education, many institutions are turning to forms of online learning as a potential solution.

Online Learning

Higher education is experiencing a time of radical, disruptive innovation due to advances in technology and greater access to the Internet. These advances have added unique, complex, and promising dimensions to structured and guided learning, particularly as they have evolved beyond the physical classroom. Adults have been

engaging in structured, distance-based learning for well over a century. Correspondence courses began as early as the nineteenth century and were geared toward university, political, and workforce education (Stubblefield & Keane, 1994). Educational radio appeared in the 1920s and 1930s, providing education to adults' homes utilizing the latest technology of the time. In 1971, The Open University, the United Kingdom's largest academic institution in terms of student numbers and the only university in the U.K. dedicated to distance learning, first enrolled students and used televisions to transmit lessons to students before moving their efforts online ("About the OU," 2013). Learning via the Internet was a natural next step to integrating technology and learning.

Heller (2013) cites the University of Phoenix as the strongest force in for-profit online education. He chronicles the move of its distance-learning program to modem-dial-up support in 1989 and the broadening of Internet-based higher education that resulted in the 1990s. "At this point, the technology was shaky, and the audience was, too" (Heller, 2013, p. 4). However, Internet-based education has gained a strong foothold in academia. Improvements in Internet speed and access, reductions in data storage costs, the proliferation of mobile devices, and more sophisticated learning management software and platforms have helped spread acceptance of online learning to a wider audience (Bowen, 2013).

The latest report by the Babson Survey Research Group reveal that about one in three college students now take at least one online course, and one in seven college students in fall 2014 took all of their higher education courses at a distance (Allen & Seaman, 2016). What is more telling may be the increase in online course participation in contrast to participation in higher education overall. Where total enrollments in higher

education declined between fall 2012 and fall 2014, enrollments in higher education online courses rose about seven percent during the same time period (Allen & Seaman, 2016). The increasing interest in online learning over traditional classroom learning demonstrates a fundamental shift in delivery of postsecondary education with "no compelling evidence that the continued robust growth in online enrollments is at its end" (Allen & Seaman, 2011, p. 6). Online education has manifested in varying forms, with varying degrees of technological integration. In his speech to the Stanford community, Bowen (2013) shared that "all of us feel the pervasiveness of the Internet in higher education by the increasing use of it…Even courses that are called 'traditional' almost always involve some use of digital resources" (p. 73).

The rapid changes in higher education and the very structures by which adults engage their learning call into question how online education impacts adult learning. Dynamic technical environments and technologies have the potential to create new ways of educating adults and unique conditions for a specific type of adult education. Adult learning and development emphasizes an education that privileges, encourages, and fosters development of the mind to more complex ways of knowing, so that adults may better meet the demands of their current lives. Adult development theories lend a helpful frame for further exploring in what ways, if any, technology supports adult learning.

Adult Growth and Development

Adult development theories related to learning span perspectives of biological processes, psychological processes, sociocultural factors, and cognitive patterns (Merriam & Caffarella, 1999). These perspectives lend adult educators a foundation for understanding how adults make meaning, and they answer fundamental questions about

what, how, where, and when adults learn. Taken in consideration together, developmental theories provide a panoramic view of both the mechanics of how adults grow and learn, as well as the outcomes of such transitions. To many, development is the goal of an adult education. Lindeman (1926) proposed that "the chief purpose of [adult education] is to discover the meaning of experience; [it is] a quest of the mind which digs down to the roots of the preconceptions which formulate our conduct" (p. x). How we go about discovering and interpreting the meanings of our experiences is the crux of adult development. Later, Dewey (1964) echoed Lindeman when he wrote,

> The aim of education is growth or development, both intellectual and moral. Ethical and psychological principles can aid the school in the greatest of all constructions—the building of a free and powerful character. Only knowledge of the order and connection of the stages in psychological development can insure this. Education is the work of supplying the conditions which will enable the psychological functions to mature in the freest and fullest manner. (p. 207)

Thus, considerations of development are critical to cultivating the conditions that support and challenge adults to learn and grow.

Constructive-developmental theory (Kegan, 1982, 1994) offers a particularly robust framework for exploring the structures in which adults construct meaning. Robert Kegan (1982, 1994), whose work is grounded in Piaget's theory of children's cognition, brings to bear a structure of how adults construct meaning of their emotional, personal, and social worlds. This internal development is perpetuated by one's capacity for perspective taking (Drago-Severson, 2009), or how what one is *subject to* evolves into what one can hold as *object*. The subject-object relationship is balanced between what

we cannot see inside ourselves, or what we are subject to, and that on which we can see or take perspective, or what is object to us. As Kegan (1994) articulates, "we have object; we are subject" (p. 32). Constructive-developmental theory tracks this subject-object movement through a series of six increasingly complex stages. Movement through these stages is an evolution, a continual re-definition of meaning and self. However, this movement does not occur in a vacuum; rather, the context in which adults make meaning has an integral role in their development. This context is known as the "holding environment" (Drago-Severson, 2004, 2009; Kegan, 1982, 1994; Winnicott, 1965).

Holding environments are "the nurturing context in and out of which a person grows" (Drago-Severson, 2009, p. 57). When creating a holding environment that will support the development of adult learners, Drago-Severson (2009) advocates for a context that balances high support with high challenge. Supports and challenges have both internal and external factors (McCallum, 2008). For example, internal supports may be a learner's sense of resilience and self-care, while external supports may be physically safe and comfortable surroundings and a supportive group atmosphere. Internal challenges may be a learner's sense of anxiety or fear, and external challenges may be conflict, rapid change, or ambiguity. These factors come together to provide a context, and often catalyst, for an adult's growth and development. Many adult educators attempt to create a holding environment that supports their students' development in the traditional, face-to-face classroom. How adult educators may do the same in the online classroom, given the unique challenges of online learning, is a gap in the literature.

Challenges of Online Learning

Constructive developmental theory lends a powerful framework for considering the ways in which adults at varying developmental levels make meaning of the supports and challenges manifested in the holding environment. Likewise, the way in which adult learners meet and adapt to challenges is, in part, determined by their developmental stage or way of knowing (Kegan, 1982, 1994). In the case of online learning, the holding environment presents two specific types of challenges, one of an epistemological nature that challenges the ways in which adults construct knowledge, and one of an ontological nature that challenges the ways in which adults relate to and through technology. Song and Hill's (2007) model for understanding self-directed learning in online environments lends a clear foundational understanding of the epistemological demands of learning in a in this particular context, and Turkle's (1995, 2011, 2015) body of work on relationships between technology and the self serves as the grounding for discerning the ontological demands of online learning. As Song (2005) points out, studies to date have sought to improve overall understanding of the context where self-directed learning is concerned, but "what appears to be missing in the literature is a robust research base related to specific characteristics that enable success in online learning contexts" (p. 105). It was my intention in this study to explore how constructive-developmental theory may shed light on this gap in the literature.

Epistemological Demands

How adults construct knowledge and engage their habits of mind within an online learning context may largely be determined by their capabilities for directing their own learning. According to Shapley's (2000) survey of undergraduates enrolled in a web-

based chemistry course, students need high levels of self-direction in order to independently navigate and learn in an online environment. Lai's (2011) study of self-directed learning readiness and network literacy on online learning effectiveness in a class of civil servants in Taiwan revealed that active learning, love of learning, and independent learning were significant predictors of online learning effectiveness of civil servants. These findings suggest that Kegan's (1994) assertion that self-directed learning requires a certain capacity of mind would also apply to online learning, where independent learning is a critical asset. If effectiveness in an online learning context requires a high level of self-direction, then effectiveness in an online learning context may require a later developmental stage or more complex way of knowing, one that one-half to two-thirds of the adult population does not yet hold (Kegan, 1994).

Ontological Demands

Technology, particularly computer technology and the Internet, influences how we connect to ourselves and each other. The ontological demands of online learning lead to considerations of loneliness and solitude (Turkle, 2011), how learners co-construct meaning and express vulnerability and personal growth (Barab, Thomas, & Merrill, 2001), and how learners experience social and emotional development in online environments (Khoo and Forrett, 2011). Turkle (2011), the founder and director of the MIT Initiative on Technology and Self, writes that technology gives us "the comfort of connection without the demands of intimacy" (p. 10). Whether or not the possible intimacy cultivated in a face-to-face classroom can be replicated in the online environment remains an area of inquiry. Harvard University president Drew Gilpin Faust told *The New Yorker* reporter Heller (2013), "Part of what we need to figure out as

teachers and as learners is, where does the intimacy of the face-to-face have its most powerful impact?" (p. 5). In this vein, Barab, Thomas, and Merrill (2001) focus on how technology supports human-to-human interactions, specifically the co-construction of meaning through sharing of personal experiences and expressions of vulnerability and personal growth. A distinctly ontological slant, like Turkle (1995, 2011, 2015), they assert "there has been much discussion with respect to the 'technical' dimension of distance learning. However, less often discussed is the equally important 'human' or social dimension to these environments" (Barab, Thomas, & Merrill, 2001, p. 109). When we learn online, our connections to one another are limited to those made through a digital divide, leaving us with a sense of being "alone together" (Turkle, 2011) and not subject to the challenges that face-to-face communication can bring. Technology may seemingly make our lives easier, but what this means for the nature of our interactions, and the wider implications for learning with others, is critical to consider as we continue to and become accustomed to connecting and learning with each other through multiple technologies instead of face-to-face methods.

Empirical research shows that adults can experience developmental shifts in a formal learning context, given a robust holding environment with the developmentally appropriate supports and challenges (Drago-Severson, 2004; Marion, 2004). How this translates to an online learning context, however, remains to be studied in-depth. Scholars have demonstrated that online learning environments may be designed with adult development and growth in mind (Barab, Thomas, & Merrill, 2001; Khoo & Forrett, 2011), but the effectiveness of actual pedagogical structures that bring about a developmental shift, or a transformational learning experience, is still being studied

(Keegan, 2011; Smith, 2012; Arroyo, Kidd, Burns, Cruz, & Lawrence-Lamb, 2015; Provident et al., 2015; Forte & Blouin, 2016). In addition, scholars have not yet studied how an online learning classroom may function as a holding environment for adult development (Marion, 2004). By framing the challenges online learning places on adult learners from a developmental perspective, one can begin to fill that gap in the literature.

Statement of the Problem

Online learning, in its various forms, is swiftly transforming higher education. Colleges and universities currently are struggling to reconcile the tension between maintaining economic sustainability and preserving a commitment to quality and traditional academic values, particularly with regard to the advent of online learning. Meanwhile, for adults with busy lives and competing priorities, online learning offers many advantages over brick-and-mortar classrooms, promising to address issues of access, convenience, and economics. Adults are participating in structured online learning opportunities in ever-increasing numbers. Almost one-third of all higher education students now take at least one course online, and "distance education enrollments continue to grow, even in the face of declining overall higher education enrollments" (Allen & Seaman, 2016, p. 4). While online learning rises in popularity, this relatively new phenomenon also places novel demands on adults and their meaning making in these online educative spaces.

Adults are forced to navigate new territories in their understandings of online learning in two distinct ways. First, online learning challenges the ways in which most adults "know" or construct knowledge. Self-direction and independent learning are necessary for effective online learning experiences (Shapley, 2000; Lai, 2011), and yet,

self-directed learning exceeds most adults' cognitive developmental capacities (Kegan, 1994). Second, advances in technology are outpacing individuals' capacities for self-reflection on their relationships with technology (Turkle, 2011, 2015), leading to questions about how adults bring themselves and their senses of self to a structured online learning context. The sense of being "alone together" (Turkle, 2011) in a virtual context presents a paradox that challenges the way adult learners connect and make meaning in online educative spaces.

In the face of the changing landscape of 21st century higher education, the incongruence between the demands of online learning and the cognitive and reflexive capacities of most adult learners poses a critical and exigent problem that deserves deep consideration. While the literature concerning online learning is vast, missing is the developmental perspective on learning with and through technology. Likewise, numerous studies have examined the phenomenon of adult meaning making in face-to-face learning environments, but none to date have explored how adults make meaning in an online context. How online, structured, educative spaces influence the developmental nature of individual learning, along with the wider implications for virtual connectedness, is ripe for study.

Purpose of the Study

The purpose of this study was to understand how adults construct meaning, develop, and grow within the context of an online, structured, educative space. The research questions guiding this study were:

1. How does an adult's developmental stage, or way of knowing, shape his or her online learning experience?

2. How do adults at varying developmental stages describe and understand the alone/together paradox in the online learning environment?
3. How, if at all, may an online, structured, educative space foster developmental shifts that will help adults meet the unique demands of online learning?

Significance of the Study

As online learning becomes an increasingly popular version of higher education, the implications of this study become even more significant, and the contributions are both theoretical and practical. From a theoretical perspective, this study lends insight into the deeper challenges that adults contend with in the online learning environment by framing them from a constructive-developmental perspective. This study also presents the learning experience as a phenomenon of meaning making, and it applies Kegan's (1982, 1994) theory of meaning making to the specific context of online learning. In this regard, this study tests constructive-developmental theory in the online context and contributes to the theoretical literature around how adults' ways of making meaning shape their learning experiences. This study is also theoretically significant by applying adult learning theory to Turkle's (2011) thesis of technical connectedness, thereby exploring how adults make sense of the alone/together paradox in the online environment. As a result, the study addresses a theoretical gap in the literature by bringing together adult learning theory and the technical environment to understand how adults learn their way through (Nicolaides & Yorks, 2008) the demands of online learning and the alone/together paradox.

From a practical perspective, this study sheds light on the developmental diversity that exists among adults in the online learning environment, currently a blind spot in the

literature on online learning design and pedagogy. By considering how adults construct meaning in varying forms, educators may better design the online learning environment to foster adults' growth and development. This study is also significant to the practice of designing effective online pedagogical structures that manifest a holding environment. By implementing structures that provide appropriate supports and challenges to a group of developmentally diverse adult learners, educators may more effectively engage the alone/together paradox in the online classroom. The implications of this study lend a developmental perspective to the design and pedagogy of online learning.

CHAPTER 2

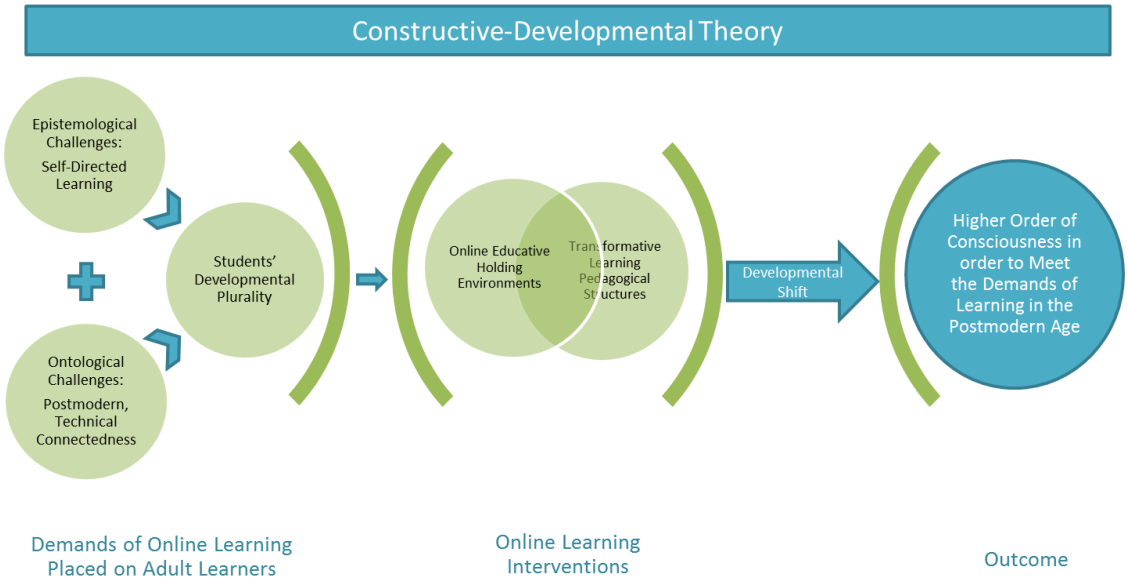
LITERATURE REVIEW

Studies of online learning have explored the experiences of adult learners in varying online learning contexts. However, the developmental perspective on online learning is scant, and empirical research in this area is a critical gap in the literature. Mostly conceptual writings have focused on transformative learning in online courses and pedagogical structures that may foster perspective shifts in this particular context. This chapter is a review of the literature that both informs the problem that this study addresses, as well as grounds the study in a conceptual framework of online transformative learning and development. The chapter is organized into three areas of scholarship that frame how adults may learn, develop, and grow within the context of online, structured, educative spaces. These three areas of inquiry are: (1) the current demands and challenges adults experience with online learning, (2) adult learning and development theories, namely constructive-developmental theory and transformative learning theory, and (3) the empirical and theoretical literature on transformative pedagogical structures in online environments. These areas of inquiry also inform the conceptual framework for this study, presented as Figure 2.1 in the following section.

Conceptual Framework

The conceptual framework for this study is situated in the three major areas of inquiry of this literature review.

Figure 2.1



Conceptual Framework

The framework begins by presenting the epistemological and ontological challenges that adult learners face in an online learning context, namely the self-directed learning required of online courses (Shapley, 2000) and the postmodern, technical connectedness that adults experience when they relate to themselves and each other through technology, also known as the "alone/together" phenomenon (Turkle, 2011). The way in which adult learners adapt to these challenges and understand alone/togetherness as paradox may be, in part, determined by their cognitive developmental level, or the structure by which they make meaning (Kegan, 1982, 1994). Adults come to the classroom at varying developmental stages; this invisible diversity within a learning cohort constitutes a "new kind of pluralism, namely the differing ways of knowing, or meaning making, that adults bring to both their learning experiences and their lives as a whole" (Drago-Severson, 2004, p. 11). The first area of the conceptual framework, then, reflects the potential relationship between adults at varying

developmental stages and how, in turn, those influence how they make sense of the epistemological and ontological challenges of online learning. This piece of the conceptual framework is reflected in the first two research questions for this study: how does an adult's developmental stage, or way of knowing, shape his or her online learning experience?, and how do adults at varying developmental stages describe and understand the alone/together paradox in the online learning environment?

The second area of the conceptual framework depicts the characteristics of a transformative online learning environment. This representation considers the holding environment, or "the nurturing context in and out of which a person grows" (Drago-Severson, 2009, p. 57), and the transformational learning pedagogical structures designed to foster developmental shifts. Of prime interest in this research study is how online learning spaces may act as holding environments to support and challenge adults so that they may learn and grow in their developmental capacities and ways of knowing to meet the demands of learning in the 21st century.

The third and last area represents the developmental shift to a higher order of consciousness or more complex way of knowing that an adult learner may undergo as a result of transformational learning. This final stage of the conceptual framework is the potential outcome of considering developmental plurality in the classroom and creating an online holding environment using transformational learning pedagogical structures. The hypothesis is that the developmental shift or perspective change will enable adults better to meet the demands of learning in the 21st century. The second and third areas of the conceptual framework are reflected in the third research question of the research study: how, if at all, may an online, structured, educative space foster developmental

shifts that will help adults meet the unique demands of online learning? A review of the theoretical and empirical literature involved with each of these research questions, as bounded by this conceptual framework, will reveal the depth and breadth of the current research on this topic and illuminate the potential for further inquiry.

Demands of Learning in Online, Structured, Educative Spaces

For the purposes of this review, I narrowed the search for empirical research and peer-reviewed journal articles that specifically addressed the demands adults face when learning in a structured online environment. I searched the ERIC and PsycINFO databases for the following key terms and authors: online learning, virtual learning, asynchronous online learning, transformative learning online, self-directed learning online, technology and self, adult development online, adult learning online, online learning theory, connectivism, Community of Inquiry, constructive-developmental theory, Turkle, and Norman. Simultaneously, I began my search for research on the influence of technical connectedness on learning through Turkle's (1995, 2011) and Norman's (2010) work, as well as scanning Moore's (2013) *Handbook of Distance Education* later. In addition, I used Song and Hill's (2007) research on self-directed learning in online environments, and their reference lists, to further explore demands of online learning. Finally, I searched specifically for dissertation studies on transformative pedagogy and growth and development online through ProQuest Dissertations and Theses.

Two themes arose as I explored the literature, revealing a dichotomous nature of how adults learn their way through technology. One theme is the relationship that adults have with technology as they relate to themselves as users and as they relate to others

through the technical divide. I have come to understand this type of demand as ontological, or challenges to individuals being with technology. The other theme that arose from the literature is the demand that technology places on how adults must navigate the context in their own learning and self-directedness. I have come to know this as an epistemological challenge to the ways in which adults construct knowledge in the online context. Although my intention in this study is to explore how constructive-developmental theory may shed light on these challenges and enable success in online learning, we must first understand what may impede it.

Being with Technology

The ontological nature of learning online may be understood by considering how adults relate to and with each other through technology, since learning alone and learning with others online is mediated by a computer and the Internet. In fact, the ways in which adults bring themselves to the technology raises questions about the influence on their learning experience. Turkle (2011) writes that technology robs us of the virtues of deliberateness, attentiveness, and living fully in the moment. She cautions that when we are constantly checking e-mail, texting, instant messaging, posting on Facebook, reading 24 hour news, and multi-tasking with our technological devices, we have the sense of continual connection in a virtual world that can take us away, in a sense, from the "real world" (Turkle, 2011). In a seemingly paradoxical situation, through technology we become accustomed to constant connection, and yet feel even lonelier in these virtual connections than when we are face-to-face (Turkle, 2011). "[Online] we are together but so lessen our expectations of other people that we can feel utterly alone" (Turkle, 2011, p. 226). Despite being able to connect and communicate with people all over the world, the

nature of our interactions has changed. Based on over fifteen years of research and hundreds of interviews, Turkle (2011) describes the phenomenon of virtual connectedness as being "alone together."

The paradox of being both hyperconnected but lonely at the same time has yet to be explored in the structured online learning context. The online environment poses unique conditions for learning. In online, structured, educative spaces, adults learn both on their own and they learn with the instructor and their peers. Online, individuals must navigate the uncertainty and ambiguity of interpersonal interactions and social relations (Turkle, 1995). More specifically, learners may project deeply held issues and experience emotion within their interpersonal interactions online (Dirkx & Smith, 2009). The online context may also make learning together easier for some adults. Cranton (2010) cites the "stranger on the train phenomenon" of online interactions, communicating with people that you have never met or are not likely to meet. Additionally, some students feel more comfortable "speaking" up or communicating in the online classroom (Meyers, 2008; Olaniran, 2004). Smith (2012) notes that in an online learning context, instructors must create conditions that foster a sense of safety around these interactions with virtual strangers.

Norman (2010) contends, "as our technologies have matured, especially as everyday technologies have come to combine sophisticated computer processing and worldwide communication networks, we are embarking upon complex interactions" (p. 6). One allure of interacting via technology is the convenience and seemingly simplified means for communicating with one another. And yet, Turkle (2011) warns, technology gives us "the comfort of connection without the demands of intimacy" (p. 10). It may

make our lives seem easier in the short run, but what this means for the nature of our interactions, and the wider implications for relationships with others, is ripe for study as we continue to and become accustomed to connecting to each other in online classrooms instead of more traditional face-to-face methods.

Not only does emerging technology have a profound effect on how we communicate with each other, but also how we connect with one another interpersonally. We become accustomed to constant connection through technical devices like cell phones and technical applications like social media, and when we are suddenly disconnected, it can seem disorienting, as if something is missing. Turkle (2011) asserts that a generation of young people is in danger of not knowing how to be alone without being lonely, not knowing how to experience solitude. "…Many find that, trained by the Net, they cannot find solitude even at a lake or beach or on a hike. Stillness makes them anxious" (Turkle, 2011, p. 289). As technology quickly develops and evolves, it often outpaces our reflexive capabilities to make sense of the new ways we connect and communicate. As a result, we are connecting differently, but we cannot be sure of the implications of exchanging solitude and intimacy for convenience and broader, shallower connectedness.

We have become accustomed to a new way of connecting – and being – with technology, signaling what Best and Kellner (2001) call "a postmodern shift from a Big Machine and Bureaucracy Age to an innovative type of computer technology and novel forms of subjectivity and culture" (p. 218). Turkle (1995) portrays personal computers as enabling our postmodern selves to exist in a hyperreality. Through fragmented, constructed, and provisional software windows on our computers, we are able to fully participate in realms of simulation and cyberspace, and we can realize "the variety of

roles we play and the many dimensions to our subjectivity" (Best & Kellner, 2001, p. 218). Hyperreality perhaps plays out best on the computer screen, and Turkle's (1995) interpretation of the human experience with technology prompts this researcher to question adult experiences in online learning environments. Technology adds to the complexity of our learning when one considers the art of teaching, the design of instruction, and the science of technology coming together under one discipline to create online learning environments for adult learners with a variety of backgrounds and perspectives (Solomon, 2000).

Barab, Thomas, and Merrill (2001) and Khoo and Forrett (2011) explore elements of adult development in an online learning context, turning their attention to the more ontological means by which adults make meaning through online learning. Barab, Thomas, and Merrill (2001) focus on how technology supports human to human interactions, specifically the co-construction of meaning through sharing of personal experiences and expressions of vulnerability and personal growth. A distinctly ontological slant, like Turkle, they assert that "there has been much discussion with respect to the 'technical' dimension of distance learning. However, less often discussed is the equally important 'human' or social dimension to these environments" (Barab, Thomas, & Merrill, 2001, p. 109). The topic of the course they studied was itself on adult development and was designed specifically to support a sense of community through discussions of interpersonal issues and deep critical and reflective thinking. According to the authors, the results of the study signified elements of personal growth in that the students were willing to be vulnerable, were engaged in deep learning, and developed a sense of camaraderie with their online collaborators.

Khoo and Forrett (2011) take a more holistic approach of development, paying attention to multiple levels of development, including personal, interpersonal, and community aspects of learning in an online learning community. They also take into account the lecturer's development, along with how the students in a fully asynchronous online master's level educational research methods course grow in their development over the course of a semester. Findings of their study show that by participating in the course activities specifically designed to foster community growth as a way of achieving course goals, both the lecturer and the students demonstrated intellectual, social, and emotional growth.

Knowing with Technology

The epistemological nature of learning online may be understood by considering how adults construct knowledge and come to learn online. Two particular studies, Shapley (2000) and Lai (2011), illuminate aspects of autonomy and self-direction in the way that adults come to know that influence their online learning experience. The purpose of Shapley's (2000) study was to explore how students' experiences and performances differed in a traditional lecture version of an upper level chemistry course and a new web-based version of the same course at the University of Illinois. Shapley (2000) surveyed her enrolled students in both versions of Chemistry 331 and analyzed their performances on course assignments and exams. Her results show that students enrolled in the web-based version of Chemistry 331 scored slightly better (2%) on exams than the lecture students did. Survey results show that students viewed their learning experience as largely self-directed, noting that "they had to teach themselves the material" (Shapley, 2000, p. 48). The most commonly cited downsides of the web-based

format was that students worked harder than they expected by learning the material without the aid of a lecture and professor's explanation (Shapley, 2000). However, successfully learning the material and mastering concepts on their own resulted in slightly better than average performance on assessments. Implications of the study suggest that an online course format requires certain levels of self-direction but may also improve student performance on examinations that require complex reasoning skills (Shapley, 2000).

Lai (2011) explored the effect of self-directed learning readiness and network literacy on online learning effectiveness. He surveyed 283 regional civil servants in Taiwan that were enrolled in an asynchronous online training program provided by the Regional Civil Service Development Institute in Taiwan. His questionnaire contained three scales—the Self-Directed Learning Readiness Scale, a network literacy scale, and an online learning effectiveness scale. His survey results show that civil servants' self-directed learning readiness was high, signifying that this population "valued the importance of being self-directed learners in online learning environments" (Lai, 2011). A linear regression analysis reveals that active learning, love of learning, and independent learning were significantly related to online learning effectiveness. Active learning is the strongest predictor in the regression model, suggesting that adult learners choose their own materials, activities, and learning paths in online courses can generate better learning outcomes (Lai, 2011). An additional key finding is that an adult learner's ability for self-directed learning readiness had greater effect on online learning effectiveness than his or her network literacy (Lai, 2011). Lai (2011) suggests that "adult educators or training coordinators should note the great influence of self-directed learning in facilitating adult

learners to develop positive online learning experiences" (Lai, 2011, p. 104). The implications of Lai's (2011) study is that self-directed learning readiness, particularly active learning, love of learning, and independent learning, and the conditions that promote self-directed learning, are critical components for success in an online learning environment.

Song and Hill (2007) point out that not only does the online learning context influence how much control a learner has over his or her environment, but it also influences his or her perceived level of self-direction. A 2005 study by Vonderwell and Turner supports this notion, citing pre-service teachers enrolled in an online technology application course who expressed that they had felt they had more control of their learning and used resources more effectively. Yet to what extent a specific learning context influences self-directed learning, and in this case the online learning context, remains to be fully understood (Song & Hill, 2007).

Self-directed learning as a concept has often been cited as one of the primary goals of educational institutions, that is, to enable students to be lifelong, self-directed learners (Merriam, Caffarella, & Baumgartner, 2007). Candy (1991) distinguishes between self-direction as a method of education and self-direction as an outcome of education, namely in the form of autonomy and self-management. This distinction is imperative when considering a goal of adult development as cultivating capacities for independent and autonomous thinking (Mezirow, 2000). Similarly, Song and Hill (2007) identify two perspectives from which self-directed learning has been explored in the literature—process and personal attribute. Process is the means by which the instruction is organized, focusing on the level of learner autonomy over the instructional process

(Song & Hill, 2007). Self-directed learning as a personal attribute, on the other hand, describes an individual "who can assume moral, emotional, and intellectual autonomy" over their educational endeavors (Song & Hill, 2007, p. 28). The personal attribute perspective of self-directed learning is more in line with the developmental perspective of learning and will offer a focus for the rest of this section. For learners, the online context offers challenges and opportunities with respect to their personal attributes—namely how learners utilize the resources of the online context, how learners communicate within the online context, and how the motivations of online learners influences their experiences.

Resource utilization in this context refers to both human resources and information resources (Hill & Hannafin, 2001). How learners use their peers and their instructor in an online context, as well as how they navigate the information and paths to that information, are considerations of self-direction. The challenges pertaining to utilizing resources for an adult learner come from potential delays in the response time on the part of the instructor (Hara & Kling, 1999), uncertainty about accuracy of peer knowledge (Petrides, 2002), and assessing the validity and reliability of resources accessed and information gathered through electronic media (Tobin, 2004; Song & Hill, 2007). How adults use resources in order to form opinions, construct knowledge, and determine truths can be a challenge within the online context.

The unique challenges of learning in an online context extend to communication strategies as well. As Song and Hill (2007) point out, most of the communication in an online class is written rather than verbal, as is traditional in a face-to-face class. The text-based learning environment can be a difficult adjustment for some learners, as the emphasis of written language over facial expressions and nonverbal cues may lead to

misinterpretation (Petrides, 2002). The timing of communication is another factor, as responses from instructors can be delayed (Hara & Kling, 1999) and learning cohorts may not respond to written communication (Vonderwell, 2003). A sense of uncertainty and ambiguity from lack of communication may not serve well as a holding environment for many students.

The third epistemological challenge of learning in an online context is framed in terms of how adults experience the motivation to learn online. Research suggests this particular motivation is a difficult task because it is easy to hide in an online environment by logging in without attending to the task on the screen (Song, Singleton, Hill, & Koh, 2004) and because it is easy to procrastinate in an online course without the immediate accountability of an attendance policy or reading schedule (Elvers, Polzella, & Graetz, 2003). Whereas physical presence constitutes attendance in a traditional face to face classroom, one's presence online may not hold the same potential for engaged learning. Biesenbach-Lucas (2003) observes that although students may fulfill course requirements by posting text online, this does not necessarily indicate meaningful cognitive thinking. The motivation to learn deeply can be a real challenge to adults in online learning contexts. These epistemological challenges—utilizing resources, communicating online, and motivating online learners—place demands on the ways in which adults conceive of and build knowledge.

The online learning environment requires that adults tend to both types of demands that being placed on them—the epistemological demand that requires they self-direct their learning to some degree, and the ontological demand that requires they manage an "alone together" (Turkle, 2011) paradox of virtual connectedness. Given

these two types of demands specific to the online context, the challenges of learning in the 21st century may require a new approach. The demands of the emerging online context are such that instruction typically delivered in face-to-face environments may not necessarily guarantee successful learning outcomes. Rather, another way of understanding how adults contend with the challenges of online learning may help educators address them. In this spirit, I propose addressing the demands of the online context by considering the developmental perspective. A theoretical framework that provides a lens for change and transformation is critical when considering how adults may experience the online learning context.

Adult Development and Transformation

The overarching theory for this research study is Robert Kegan's (1982, 1994) constructive-developmental theory, a theory of adult cognitive development, or how one makes meaning of his or her experience. Closely aligned with the process of adult cognitive development, transformative learning theory (Mezirow, 1991, 2000) addresses the nature of such development specifically related to adult learning. By examining the learning that enables forms of mind to transform (Kegan, 2000), transformative learning theory lends the means to explore the "how" of developing our capacities. These two mutually reinforcing theories frame this research inquiry into adults' online learning experiences.

Theories of Adult Cognitive Development

Many scholars prior to and since Kegan have developed theories of adult cognitive development, and it is worthwhile to explore the similar themes in which these theorists track the fundamental elements of development. Rather than methodically detail

each theorist's work and consider his or her framework for development as a single view for interpretation, I have taken a more integrative approach, reviewing these theories in the summary table below from three themes consistent across the scholars' works. These themes are structure, movement, and context.

The table on the following pages briefly compares and contrasts some of the most influential and representative cognitive developmental theories in the field of adult development. Theorists whose works I reviewed include Loevinger (1976), Perry (1970, 1981), Kegan (1982, 1994), Jaques (1994), Torbert (1976, 1991, 2004), Belenky, Clinchy, Goldberger, & Tarule (1986), and Cook-Greuter (1999, 2000). These theorists were included both for the pioneering nature of their theories and the important and distinct contributions they represent in the field of adult cognitive development. Viewed together, the following theorists offer a thorough picture of how adults structure and navigate their meaning making.

Table 2.1

Theories of Adult Cognitive Development

	Loevinger (1976)	**Perry (1970, 1981)**	**Kegan (1982, 1994)**	**Torbert (1976, 1991, 2004)**	**Jaques (1994)**	**Belenky et al. (1986)**	**Cook-Greuter (1999, 2000)**
Theory	Theory of Ego Development	Intellectual and Ethical Development	Constructive-Developmental Theory	Developmental Action Inquiry (DAI)	Human Capability	Women's Ways of Knowing	Post-conventional Ego Development
Description	A process of ego maturation that follows a series of sequential stages describing how a person interprets life experiences. Characterizes the ego as the filter through which a person constructs and interprets the world – it is the individual's "master trait."	The intellectual and ethical development of male college students as they move from a dualistic view of the world to a more relativist view. Final stage includes how students develop commitments with a relativistic view of the world.	Neo-Piagetian interpretation of how adults construct meaning of their emotional, personal, and social worlds, or their "ways of knowing," through increasingly complex stages of cognitive development.	A process for timely transformation that engages inquiry through single, double, and triple loop feedback as catalyst for development.	Explores human capability in solving problems and carrying out tasks in order to meet goals. Examines the patterns and complexities of mental processes (and thus, capabilities) that different levels of work require.	Explores how women make meaning of their experiences, focusing on the "voice" that women hold and how they exercise it (or silence it) in their lives.	Extends Loevinger's Theory of Ego Development to include additional and more detailed stages of post-conventional development.
Structure	3 tiers subdivided into 9 stages of ego maturation: (1st tier) Preconventional – 1. Symbiotic 2. Impulsive 3. Self-protective (2nd tier) Conventional – 4. Conformist 5. Self-aware 6. Conscientious (3rd tier) Postconventional – 7. Individualistic 8. Autonomous	4 stages of development subdivided into 9 positions: (1st stage) Dualism – basic, full (2nd stage) Multiplicity – early, late (3rd stage) Relativity – contextual, pre-commitment (4th stage) Commitment – commitment,	6 stages or "evolutionary truces" of meaning-making (orders of consciousness) based on the subject-object orientation of the individual: (0) Incorporative (1) Impulsive (2) Imperial (3) Interpersonal (4) Institutional (5) Inter-individual	Action Logics describe the overall "strategy" that informs an individual's experience of which he/she is not aware. 7 Action Logics: 1. Opportunist 2. Diplomat 3. Expert 4. Achiever 5. Individualist 6. Strategist 7. Alchemist	4 Types of Mental Processing: 1. Declarative 2. Cumulative 3. Serial 4. Parallel 4 Orders of Complexity: 1. Concrete Verbal 2. Symbolic Verbal 3. Abstract Concept 4. Universals The more complex one's capacity for mental processing,	5 major epistemological categories that describe women's perspectives: 1. Silence 2. Received knowledge 3. Subjective knowledge 4. Procedural knowledge 5. Constructed knowledge	Divides Loevinger's Autonomous (8th) stage into two separate stages: Construct-aware and Ego-aware. Characterizes the Integrated (9th) stage as Unitive or Transpersonal.

	9. Integrated	challenges, post-commitment			the larger ability to handle info fields.		
Context	Individuals grow when exposed to interpersonal environments more complex than they are.	---	In the culture of embeddedness, or holding environment, development is advanced by high support and high challenge. The holding environment serves three functions – holding on, letting go, and sticking around.	Events and relationships can trigger and support transformation. Organizations and systems encourage and discourage development, depending on the action logics of their leaders.	How individuals may come to realize or evolve into higher levels of capability is heavily influenced by their motivation and their environment.	Environment both nurtures and constrains the development of a sense of mind and voice in women. Women's roles within the contexts of education and family as nurturers, connectors, and cooperators challenge male-centric models of development.	Stages are part of a larger, integrated, more complex way of viewing and understanding the world.
Movement	Individuals must move through the stages in sequence. Development is a process of continual integration and differentiation.	Learning promotes developmental growth. Movement is not always to a higher level - alternatives are temporizing, retreat, and escape.	Characterized as decentration and recentration. Growth demands the loss of oneself and a reconstruction of the self-other relationship and can feel disorienting.	Questioning, introspection, and the search for a new perspective often spur personal transformation. Action inquiry encourages development by engaging first person, second person, and third person dynamics.	Changes in levels of role complexity can lead to a change in the state of mental process.	---	Maintains Loevinger's sequence for movement through prescribed order of stages and characterization of movement as differentiation and reintegration.

Adult cognitive developmental theorists describe the structure of development in two ways. First, theorists explore how humans organize and construct their own meaning making, and second, they present the structure of meaning versus the contents of that meaning. Fowler (1981) nicely conceptualizes this distinction, defining the structure of development as "the formally describable structuring patterns" in development research and the contents as "the realities, values, powers, and communities on and in which persons 'rest their hearts'" (p. 273). The challenge of a developmental theory, then, is designing structures (through stages, positions, levels, spirals, etc.) that underlie or support the varying contents of an individual's meaning.

The second theme across cognitive developmental theories identified here is context. Many of the theorists profiled in the table consider the interactions that individuals have with others and their environment and how those interactions constitute meaning-making activity. The cultures and contexts in which individuals are embedded play a major role in their development, either supporting them in their current developmental stage or challenging them to ascend to another developmental level in order to meet the demands of their life.

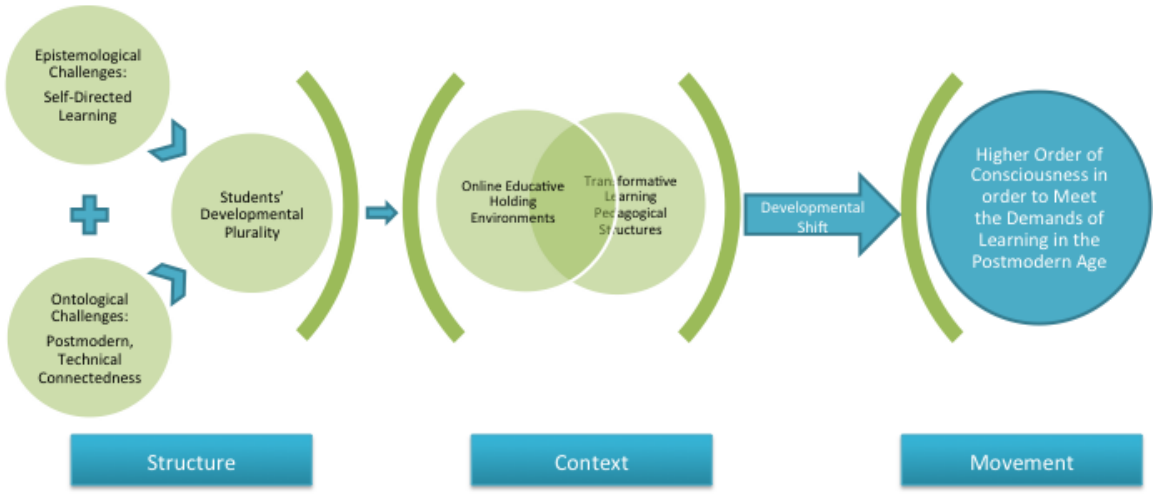
The third theme across cognitive developmental theories, movement, captures the evolution of the meaning making journey as it moves through the given structure. Whereas structure may emphasize the balances that individuals hold in certain stages of development, the theme of movement looks at the meaning in between and through those structures. These developmental theorists characterize movement as evolution, transition, differentiation, reintegration, and transformation, just to name a few terms, and the catalyst for developmental movement varies as well. Yet what remains consistent is the

import that theorists place on meaning making that individuals experience as they move through the developmental structure.

Connecting Adult Cognitive Development and the Conceptual Framework

The selected theorists address these themes of structure, context, and movement with varying degrees of depth and insight, and they answer the fundamental questions of what, how, where, and when adults learn. Taken in consideration together, these themes lend a panoramic view of both the mechanics of how adults grow and learn and the outcomes of such transitions. "Developmental theories give us a way of claiming that kind of in between position. They allow us to speak of the dynamics of change and transformation. They also allow us to focus on equilibrium and continuity" (Fowler, 1981, p. 89). By exploring the structures that describe the "in between position," the context of that position, and the continuity of developmental moves, we can shine a light on and better understand the complexities and nuances of adult cognitive development. These themes permeate an understanding of adult meaning making. These three themes mirror the three areas of inquiry of the conceptual framework as illustrated in Figure 2.2.

Figure 2.2



Conceptual Framework Reflecting Themes of Adult Development

Reflecting on the three areas of the conceptual framework, the demands of online learning and the students' developmental plurality form the scaffolding or structure for discussing in what way adults may make meaning. The second area, the online educative holding environment and transformative learning pedagogical structures, forms the context in which adult development may occur. The last area, the developmental shift as an outcome of the context in order to meet the current demands of learning in the 21st century, illustrates the movement or shift in perspective as described by cognitive developmental theory. The alignment between the fundamental elements of cognitive development and the streams of the potential research study suggests the viability and suitability of looking at online learning from a developmental lens.

Constructive-Developmental Theory

Robert Kegan (1982) offers a distinct interpretation of adult meaning making in his constructive-developmental theory. Kegan (1982), whose work is grounded in Piaget's theory of children's cognition, brings to bear a structure of how adults, through increasingly complex developmental stages, construct meaning of their emotional, personal, and social worlds. These "additional lines of development – emotional, interpersonal, and intrapersonal" (Drago-Severson, 2009, p. 36) scaffold an approach to developmental theory that explores the "internal experience of developing" (Kegan, 1980a, p. 374) in adults. This internal development is perpetuated by one's capacity for "perspective taking" (Drago-Severson, 2009, p. 37), or how what one is subject to evolves into what one can hold as object. The subject-object relationship is balanced between what we cannot see inside ourselves, or what we are subject to, and that on

which we can see or take perspective, or what is objective to us. As Kegan (1994) eloquently writes, "we have object; we are subject" (p. 32).

According to Kegan (1982), meaning is created and re-created through this process of subject-object differentiation. Kegan (1982) asserts that "the very essence of ego activity is object relations" (p. 7). What we are subject to, and in turn what we can hold as object, characterizes the development of our egos. Subject-object relations are "a succession of qualitative differentiations of the self from the world, with a qualitatively more extensive object with which to be in relation created each time" (Kegan, 1982, p. 77). Thus, development hinges on how we relate to that which is subject and then emerge from that relationship, holding the old subject as the new object. The way we relate to that in which we are embedded is a powerful structure for viewing the subject-object relationship, and in turn, adult development.

Structuring development. In his work on moral development, Kohlberg (1969) first used the term conventional and post-conventional to refer to two broad stages of moral development. Since then, developmental research has subdivided stages of consciousness into three levels knows as pre-conventional (Kegan's Stage 0 and Stage 1), conventional (Kegan's Stage 2, Stage 3 and Stage 4), and post-conventional (Kegan's Stage 5). Pre-conventional stages describe the evolution of infants and children, and these stages are associated with impulsivity and less complex levels of psychological maturity. Development into adulthood typically begins in adolescence with conventional stages characterized by conformances with wider social conventions and achieving expertise and efficiency. Finally, the post-conventional stage is characterized by an attempt to reframe problems with a broader understanding of complexity and

interdependency of systems (Cook-Greuter, 2004; Boiral, Cayer, & Baron, 2009; Brown, 2011). The following table briefly outlines each of these stages and describes adults' capacities in their conventional and post-conventional development according to Kegan's (1982, 1994) and Berger's (2012) taxonomy.

Table 2.2

Description of Kegan's Developmental Stages

Stages of Adult Development (Forms of Mind)		Brief Description
2	Instrumental (Kegan) Self-Sovereign (Berger)	Individuals are oriented toward rules and regulations and are mainly concerned with following the rules in order to get their own way. They are subject to their own wishes and desires are unable take the perspectives of others.
3	Interpersonal (Kegan) Socialized (Berger)	Individuals are oriented toward the views and perspectives of others (individuals and systems) in order to construct their own value systems. While they can take perspective on their own needs and interests, they remain subject to mutuality and relationships.
4	Institutional (Kegan) Self-authored (Berger)	Individuals are oriented toward their own self-generated values and judgments. They are able to reflect upon the perspectives of others and no longer view conflict as a threat to personal relationships. They are unable to take perspective on the limitations of their internally-generated values and belief system.
5	Interindependent (Kegan) Self-transforming (Berger)	Individuals are oriented toward transforming their own self systems. They can take perspective on the limitations of their self-authored systems, but they are unable to hold perspective on duality and the relationship between themselves and "the other."

Kegan (1982) characterizes these stages of development as evolutionary balances of psychological embeddedness, or what we hold as subject. In the Instrumental or Self-sovereign stage, the individual understands that a reality outside of his or her own point of view exists, he or she remains subject to his or her own needs, interests, and desires. Drago-Severson (2009) characterizes this individual at this stage of knowing the "rule-bound self" (p. 43). Individuals in the Interpersonal or Socialized stage of development (3) situate their meaning making in the opinions, judgments, and thoughts of others and have a socializing way of knowing. These individuals are other-focused, feel threatened when encountering conflict or criticism, and rely on authority figures for their goal-setting (Drago-Severson, 2009). Next, adults in Kegan's Institutional stage (4) of development have a self-authoring way of knowing (Berger, 2012). These individuals are able to hold their relationships with others as object, but they are subject to their own personal ideologies and self-systems; while they are open to the possibilities of others' perspectives, they remain loyal to their self-generated values. Adults in the latest stage of development, Interindependent or Self-transforming stage (5), are open to learning from others, reflecting on their own identities, and are oriented toward change. While reflective adults fear risking the loss of their identities, Interindependent adults welcome challenges to identity as opportunities for learning and growth (Drago-Severson, 2009).

Movement as development. The subject-object relationship that characterizes Piaget's and Kegan's approach evolves and "emerge[s] out of a lifelong process of development" (Kegan, 1982, p. 77). This evolution and continual re-definition of meaning and self seeks stabilization at certain levels; this holds for each of the other developmental theories discussed thus far as well. Although meaning making may

temporarily settle at the stages, positions, patterns, or levels that developmentalists term in their respective theories, the story of development does not necessarily end there. Our egos are transient, and the marker exists just to name one moment in the developmental journey. The stage isn't a destination; it is just the best way to describe where we are in our meaning-making and how our context helps us and challenges us to grow through the circumstance. Movement through these stages is the essence of development.

Kegan (1982) claims that moving through the stages of development may feel like "grief over the loss of balance, the loss of feeling at home in the world (Heimlichkeit)" (p. 185). The evolutionary balance and Heimlichkeit that our egos seek is manifested from a delicate relationship between self and other. As we develop, our growth demands the loss of oneself and a reconstruction of this relationship. In order to grow, we must differentiate our self from our subjectivity. "Growth always involves a process of differentiation, of emergence from embeddedness, thus creating out of the former subject a new object to be taken by the new subjectivity" (Kegan, 1982, p. 31). Piaget called this decentration, the loss of an old center, and then recentration, the recovery of a new center. Loss and recovery, differentiation and reintegration, moving through, growth - these are facets of the transition between orders that Kegan (1982) adroitly characterizes in his discussion of embeddedness.

The role of context and the holding environment. Kegan (1982) pairs his stages of psychological development with characteristics of a holding environment, which he also terms "cultures of embeddedness." Culture of embeddedness is apt, for indeed the context is more than just the environment in which a person stagnates in a particular order of development. Rather, the individual is deep in a particular culture and

is “embedded” in the ways of the context that supports and challenges his or her developmental growth. This holding environment acts as a bridge to transformation or a “consciousness bridge” (Kegan, 1994, p. 278). Both sides of the bridge must be well anchored and established in order to foster transformation—one end firmly on the side where the individual’s current meaning making rests, and the other end in the next highest order of consciousness or developmental level. When creating a holding environment that will support the development of adult learners, Drago-Severson (2009) advocates for a context that balances high support with high challenge and an environment that will shift in order to fit the individual’s learning style.

As an individual moves through development, he or she emerges from embeddedness and begins to differentiate from his or her context (Kegan, 1982). This emergence, however, is not the fruition of the developmental stage – it is a transition. Reintegration is the final step (Kegan, 1982). Only when that which has been subject can be taken as object and reintegrated into the world view does the individual hold a different psychological embeddedness and become embedded in a new culture (Kegan, 1982).

In focusing on movement between orders, Kegan (1982) describes three functions of a holding environment or culture of embeddedness—holding on, letting go, and sticking around. Holding on is a gentle act of the embeddedness culture, a “host” to the ego in a particular stage of development that balances a welcoming environment without stifling the ego. Kegan describes holding on as “providing careful attention, recognition, confirmation, and company in the experience—we do not tighten a grip by creating a dependence on the host to solve or manage the experiences of disequilibrium” (Kegan,

1982, p. 126). The characteristics of holding on varies among the stages, from literally holding and embracing the infant in Stage 0 to acknowledging and culturing capacities for independence or interdependence in later stages.

The next function of the culture of embeddedness, letting go, is necessary for movement through the developmental stage. Kegan (1982) acknowledges that moving through can feel scary, as though one is losing oneself. However, "healthy holding lays the stage for separation even as it meets, acknowledges, and accepts its guest" (Kegan, 1982, p. 127). Letting go, allowing the individual to transition to a higher order, is not the final function of the current culture.

The culture of embeddedness must also stick around, or remain in place during the period of transformation and re-equilibration. This will provide the individual with a sense of a recoverable loss (Kegan, 1982). However, when the culture disappears just as an individual is experiencing the loss of his or herself, this is an irrecoverable loss and is deemed "unhealthy," "abnormal," or "unnatural." The culture of embeddedness acts as a bridge to transformation. When the culture as the individual knows it is suddenly abandoned, it feels like a rejection from the culture rather than a natural turning away before looking toward reintegration (Kegan, 1982). The danger in this is that future growth can be associated with irrecoverable loss (Kegan, 1982).

The culture of embeddedness (the holding environment, the context out of which one makes meaning) is an incredibly important factor in adult development. Combined with the structure in which meaning is created and the movement of the development itself, the act of meaning making is a complex process. Adding to this complexity is also

the nature of meaning making itself, a two-fold experience that Kegan (1980b) warns against getting lost.

The epistemological and ontological nature of meaning making. Much discussion has thus far been made about the cognitive nature of adult development, as one would expect from a theory out of the Piagetian paradigm; however, discussion of meaning making should not be solely about "cognition, to the neglect of emotion; the individual, to the neglect of the social; the epistemological, to the neglect of the ontological" (Kegan, 1980b, p. 406). Constructive-developmental theory places meaning making as the prior or grounding phenomenon in personality. The theory explains how individuals make both thought and feeling. As meaning making is an evolutionary activity, personality constantly develops through stages or truces that can feel both disorienting and equilibrating. As Kegan (1982) asks, "What is at stake in these truces? Viewed from the outside, it is what shall be taken for 'self' and what shall be taken for 'other.' Will I, in other words, continue to know? Hence equilibrative activity is naturally epistemological" (p. 169). The meaning that the self makes as it comes to know in a new manner is decidedly epistemological; it is how one decides what is knowledge, what is truth.

However, meaning making takes a second form, a reaction or a consequence of this epistemological shift. Kegan (1982) explains, "what is at stake in maintaining the balance when viewed from the 'inside' is whether I (this constitution of "I") shall continue to be. Hence equilibrative activity is also naturally ontological" (p. 169). As development describes a change the very nature of who we are and who we will become, the self's questioning (and choice) of whether or not it will continue to exist, and in what

form, is an ontological query. It is in the experience of meaning-making that adults discover who they are. "For we are not our stages; we are not the self who hangs in the balance at this moment in our evolution. We are the activity of this evolution. We compose our stages, and we experience this composing. Out of this evolutionary motion, which we are, we experience emotion" (Kegan, 1982, p. 169). This evolutionary motion, this perspective change, this developmental shift – this, then, may be the source of emotion and how we relate (Kegan, 1982). The nature of developmental shifts, then, becomes much bigger than a capacity for epistemological knowing. It fundamentally changes who we are. The power of meaning making as described by Kegan (1982), particularly when considering how one may learn to become him or herself throughout a lifetime, is a rich and robust frame for conducting educational research.

Empirical research and Constructive-Developmental Theory. Research has established that adults with varying cognitive developmental orientations, or ways of making meaning, experience their learning and their learning contexts in different ways (Kegan, 1994). Kegan, et al. (2001), Drago-Severson (2004), and Marion (2004) all explore how adults make sense of their learning experiences from a constructive-developmental perspective. In Kegan et al.'s (2001) study, data from forty-one adult learners across three separate educational settings suggest that learners at similar levels of mental complexity have similar beliefs about teaching and learning, and these beliefs guide how they reflect on their educational experiences. Patterns exist among learners at distinct stages of development in how they experience their learning; specifically, there are patterns in the way that socializing knowers (Kegan's Stage 3) understand their learning that differs from the patterns that appear in way that self-authoring knowers

(Kegan's Stage 4) understand their learning (Hammerman, 1999; Berger, 2002; Marion, 2004). Large-scale studies (Cook-Greuter,1999; Kegan, 1994; Torbert, 2004; Rooke & Torbert, 2005) based on thousands of individuals have determined that most adults make meaning according to the structures of Stage 3 and Stage 4, or somewhere in transition between the two. However, approximately one third to one half of all adults are fully Stage 4 and later, with very few adults at Stage 5 (Kegan, 1994; Torbert, 2004). The relatively small percentage of adults with post-conventional developmental capacity was found to be virtually identical using Torbert's Global Leadership Profile instrument (total *N*=497) and Kegan's Subject-Object Interview (total *N*= 342).

Further, given developmentally appropriate supports and challenges, an adult's way of knowing can change and become more complex over time (Drago-Severson, 2004; Marion, 2004). This holds for pre-service teachers that participated in some elements of online learning in Marion's (2004) study, but she suggests that further "studying the online environment as a holding environment would be very useful and interesting research" (p. 264). Marion (2004) identifies themes of authority, responsibility, and perspective taking as they relate meaning-making to participants' learning experience in the qualitative studies that employ constructive-developmental theory. How adult learners take up their authority, take responsibility for their learning, and take or shift perspective on their learning certainly influences how they make meaning in a given situation. Kegan (1994) expands the notions of context to practically all areas of adulthood and posits that meaning-making influences "the curriculum of life." This study seeks to explore whether this reasoning holds in adults' online learning experiences as well.

Applying Constructive-Developmental Theory. Kegan (1994) argues that more and more, in modern life, a socializing or Stage 3 way of knowing is no longer sufficient for meeting the expectations of contemporary society (Kegan, 1994). We are facing demands of modernity and post-modernity that require Stage 4 and Stage 5 ways of knowing, respectively. These demands appear in and permeate the most important aspects of our lives, including learning.

Kegan (1994) explores the mismatch of current demands of adult learning and the capacities expected and required of adults engaged in terms of one of the core tenets of adult education, self-directed learning. Self-directed learning, Kegan (1994) asserts, requires a fourth order of mental complexity that many students do not yet possess. Educators may not even realize what they are asking of their students when they demand that they take charge of their learning in a more self-authored manner.

> Educators seeking "self-direction" from their adult students are not merely asking them to take on new skills, modify their learning style, or increase their self-confidence. They are asking many of them to change the whole way they understand themselves, their world, and the relationship between the two. (Kegan, 1994, p. 275)

Students currently operating at Stage 3 are subject to mutuality and interpersonalism, and this manifests in the way these students write papers directed at the professor as audience and the way in which they receive, or even rely on, evaluation.

> We would like them to listen and consider our evaluation to be sure, but not to be determined by it. But this would require an internal system for self-evaluation, a system that itself creates value, a fourth order request. (Kegan, 1994, p. 284)

If Stage 4 capacities are required in order for adults to successfully engage in self-directed learning, then that points toward the capacities required for learning in an online context, a postmodern sort of learning that calls on many aspects of self-direction in order to navigate effectively. The means by which adults may learn self-direction in order to meet the demands of the very context in which they find themselves learning may, in part, be address through development and growth as understood through transformative learning theory as well.

Transformative Learning Theory

Transformative learning theory and adult cognitive developmental theory are intimately linked in the literature and in practice; one seems to inform the other. Transformative learning theory strengthens cognitive-developmental theory in that it describes the learning process that may spur development and helps identify what the educator may be working toward. Kegan (1994) writes that the mission of adult education is to "assist adults in creating the order of consciousness the modern world demands" (p. 287). Humanist psychologists argue that the goal of adult learning is growth (Merriam, Caffarella, and Baumgartner, 2007), and transformative learning lends the concrete supports to realize that kind of developmental growth.

The evolutionary movement and change in developmental stage is often perpetuated by a shift in perspective described by transformative learning theory (Mezirow, 1991, 2000). Kegan (2000) articulates two processes in epistemological transformation: (1) the form by which we make meaning and (2) how we reform the form by which we make meaning. "These two processes inherent in epistemology are actually at the heart of two lines of social-scientific thought that should be in much closer

conversations with each other; the educational line of though is transformational learning; the psychological line of thought is constructive developmentalism" (p. 53). Daloz (1999) also sees transformative learning as growth and proposes that adult lives are characterized by developmental movements, often motivating students in between developmental moves to seek formal education. However, because developmental moves may take a longer time to manifest, the perspective changes described by transformative learning can be challenged, and possibly changed, over one or a few courses (Taylor, 2000).

Transformational learning is a lens that can be utilized in the context of learning environments in order to observe perspective shifts that can lead to new ways of knowing and one's capacity to view reality from increasingly complex perspectives as adults challenge their understanding of *how they know*. Transformative learning and constructive-development theory are mutually reinforcing theories that bring distinction to a type of learning that increases once capacity to see reality more fully and more complexly. Kegan (2000) explains the connections first by distinguishing between informational learning that pertains to changes in *what* we know and transformative learning that refers to changes in *how* we know. In the online learning context in particular, combining transformational learning and constructive-developmental theory allows us to look at both the active shifts in perspective as well as the forms by which adults construct those perspectives.

Merriam (2004) identifies two keys to transformative learning that call on later stage developmental capacities to employ—critical reflection and reflective discourse. As pedagogical structures, these major elements of transformational learning involve

examining long-held, socially constructed beliefs about an experience or problem and using dialogue in order to understand and assess those beliefs and assumptions. In this study, exploring these two facets of transformational learning specifically may shed light on what can aid adults at varying levels of cognitive capacity engaged in developmental movement, if at all, in online educative spaces.

Transformative Learning Pedagogical Structures

Fostering the shift in perspective required for most adults to successfully navigate the demands being placed on them in online learning contexts involves transformative learning, as discussed in the previous section. Although transformative learning is one of the most studied phenomena in adult education (Taylor, 2007), research to date has been mainly focused on face-to-face educational settings (Smith, 2012). While numerous other empirical studies have documented transformative learning theory as a useful lens for understanding students' online learning experiences, the literature on purposefully fostering transformative learning online is scant. In fact, in a 2012 critical review of the literature, Smith found only one empirical study for fostering transformative learning online (Killeavy & Moloney, 2010). My subsequent review yielded only four additional empirical studies (Arroyo, Kidd, Burns, Cruz, & Lawrence-Lamb, 2015; Forte & Blouin, 2016; Keegan, 2011; Provident et al., 2015).

Empirical Research

The purpose of Killeavy and Moloney's (2010) study was to explore the potential of blogging as a technique for reflective practice, and in turn support, for beginning teachers. The research sample included 23 secondary school teachers over a four-month period during the 2007-2008 school year in Ireland. The teachers were given training in

how to set up their personal blogs and were encouraged to maintain and share their blogs with the researchers over the course of the study. Data collection involved a questionnaire to ascertain the extent and nature of participants' previous use and attitudes toward the internet and online communication tools like social networking and blogging sites, content of the teachers' blogs, and focus group interviews. The data analysis involved a mixed methods design.

Results of the study showed that the majority of the new teachers had either never (40%) or seldom (30%) used a blog prior to the study. On the other hand, 30 percent of the new teachers reported often using a blog. Despite being similar in age, the varying attitudes of new teachers toward blogging tools create a non-homogeneous profile of these young professionals. A second finding of the study revealed that blogging was infrequently used by the new teachers to reflect on practice. Rather than using the blog as a reflective journal, the teachers used the tool more as a diary, and in terms of levels of reflection, the blog entries were all at Mezirow's (1991) level one, content reflection. "There was no evidence that the use of the blog had led to more or greater reflection on practice for the cohort generally" (Killeavy & Moloney, 2010, p. 1074). However, despite reflecting on practice while using the blog, comments during the focus group interviews and a final teachers' workshop suggested that reviewing previous blog posting was a valuable exercise for teachers to reflect on progress. A final finding of the study revealed little evidence of the teachers sharing their blogs with other new teachers, and while many of the teachers blogged about similar challenges, they often handled them on their own.

Implications of this study suggest that there is little evidence that maintaining a blog will lead to a more reflective approach to practice or a community of practice among participants. The researchers' insights for future integration of communication technology in support of reflective practice include numerous suggestions. For one, they suggest offering more direction and support for reflective practice in general. Also, situating the reflection in context (i.e. the school environment) and presenting individual challenges from blog entries as the basis for later group discussion may have been helpful in creating opportunities for the development of internal and external reflection. Third, the researchers acknowledge challenges of adopting blogs and developing an online community among some participants that had issues accessing the technology and apathetic attitudes toward the blogging medium. Finally, the authors hypothesize "the necessity for the community to be firmly established prior to its transfer to an online platform" (Killeavy & Moloney, 2010, p. 1075). In this study, the participants had only met face-to-face one time before the blogging period, and findings suggest that participants' readiness to openly discuss personal and professional competence with their peers was lacking. The authors feel strongly that "existing [face-to-face] community may benefit from the use of such [technology-mediated] communication networks. It is unlikely however that a supportive community can be initiated by the creation of such a network" (Killeavy & Moloney, 2010, p. 1075).

In a subsequent review of the literature since Smith's (2012) review identified Killeavy and Moloney's (2010) study, I found four additional empirical studies that explore the potential for fostering transformation in an online environment. The first study offers a glimpse of a research study in progress looking at a blended course

purposefully designed to incorporate critical reflection, reflective discourse, and action in order to transform students' habits of mind (Keegan, 2011). Keegan (2011) is concerned with moving the course to a fully online model, while still encouraging transformational learning in the students. The results of his on-going case study suggest a five-fold pedagogical framework to foster transformative learning in a fully online capstone course: (1) envisioning, (2) critical thinking and reflection, (3) participation, (4) partnerships for change, and (5) systemic thinking. He postulates that "there is a strong indication that technology-enhanced educational settings offer an environment conducive to this type of [transformative] learning and teaching" (Keegan, 2011, p. 72).

Three later studies present specific pedagogic assignments and activities that promote transformative learning among adults in online classes. Arroyo, Kidd, Burns, Cruz, and Lawrence-Lamb (2015) qualitative analysis of four adult students' narratives demonstrated evidence of Mezirow's (1994) eleven transformative phases, including a disorienting dilemma presented by the online environment. The authors' found that continually sharing an instructor's teaching philosophy statement in an online course challenged students' existing frames of reference. Provident et al. (2015) studied the written reflections of 113 occupational therapy clinical doctoral students who graduated from an online program. A qualitative analysis found that active learning, a cohort model, and the use of reflection, dialogue, and project implementation appeared to be effective in facilitating transformative learning. Forte and Blouin (2016) found evidence that perspective shifts on sociocultural issues occurred among adults in an online ESL professional development program. The authors attributed the change in perspectives to the pedagogical design for critical reflection and questions that encouraged in-depth

analysis of one's own beliefs. Each of these studies contributes to the growing body of literature on translating transformative learning teaching strategies to structured online learning environments.

Conceptual Research

A review of conceptual articles and books yield several practices that instructors may consider in order to create conditions for transformative learning. The two main learning activities of transformative pedagogy in the literature are discussion and reflection (Merriam, 2004; Smith, 2012). In the formal online learning environment, discussion may take many forms such as whole class discussions, one-on-one interactions, role-play, problem-based collaborative learning, teamwork, parallel leadership, conversational dialogue, and critical discourse (Ryman, Burrell, & Richardson, 2009; Smith, 2012; Yuzer & Kurubacak, 2010; Ziegler, Paulus, & Woodside, 2006). Reflection in the online learning environment may be encouraged through activities like mindfulness practices, journal writing, contemplation, storytelling, and engaging emotions (Dirkx & Smith, 2009; Paulus, Woodside, & Ziegler, 2007; Sable, 2010). How instructors attempt to facilitate these practices and apply transformative pedagogical structures in the online environment is the core theme in the conceptual literature.

For example, Meyers (2008) outlines five suggestions for implementing transformative learning in online classes. His strategies are grounded in the traditional pedagogical structures of transformative learning that he in turn attempts to translate to an online course. He describes the ways he has implemented aspects of each of these five strategies in an online psychology course he teaches for undergraduate students,

emphasizing how he attempted to apply transformative pedagogy in the online classroom. The first strategy is creating a safe and inviting environment, which involves increasing trust among students as well as between student and professor. Avoiding teaching styles that increase the power differential in the student-professor relationship and instead naming and creatively working around that power dynamic through supportive online comments and personal revelations may help to increase the level of trust. The second strategy is encouraging students to think through and critically examine their experiences and underlying beliefs and biases. Examining assumptions and imagining alternative ways to understand the world may be encouraged through reflective dialogue that spans over many days in an online discussion forum. The third strategy is promoting engagement and student participation. In order to do this, Meyers (2008) suggests adapting traditional face-to-face activities like debate for the online environment and incorporating additional Internet tools beyond the course website (e.g. weblogs or wikis) to increase interest. The fourth strategy involves using real-world problems in activities to connect course content to sociopolitical issues in order to raise consciousness and awareness of oppressive experiences, systems, and forces. Beyond encouraging students to use online resources to discover information about these systems and forces, Meyers (2008) does not demonstrate how the technology may support students' perspective shifts. Lastly, Meyers (2008) advocates for pedagogy that encourages action-oriented solutions and proposes, again, that exploring external online resources may support students in finding ways to support the common good. Through these five strategies, Meyers (2008) conceives of ways instructors could implement transformative pedagogy in an online classroom.

Henderson (2010) seeks to "raise awareness among faculty, generate interest for their conducting further research, and enhance their practice" (para 1) by synthesizing the conceptual literature on online transformative learning. She identifies four main topics in the current research: critical reflection, relationships, support, and discourse. Critical reflection on readings and life experiences may be fostered through class member discussion and journaling. Instructors and students can form trustful relationships by sharing information openly, beginning with introductory photos and messages, and then achieving mutual and consensual understanding aided by synchronous chats and video/audio conferences. Henderson (2010) identifies a dearth of information about the nature of support in the online environment, but she does report that structures like clear syllabi and frequent feedback and comments may lend a sense of support. The final topic, discourse, may arise in a variety of ways (discussion threads, chat functions, video) and among a variety of interactions among students and between student and instructor. Henderson (2010) points out that an asynchronous text-based online environment may foster freer discourse, as students can communicate uninterrupted thoughts and opinions via their writing. Technology that supports each of these means of teaching may support transformative learning online.

Smith (2012) takes a different view in her critical review of the literature and focuses on the considerations online instructors and designers of online learning environments should make to foster transformative learning online. Her analysis yields the following four factors:

> (1) deliberate attention to a strong pedagogy in the design of the course, (2) instructors who deliberately allow for a learner-centered approach, (3) deliberate

> attention to the students' ability to interact with one another through sustained discussion and through the use of complex problems or issues in a safe environment, and (4) deliberate attention to students' abilities to engage in self-reflection. (p. 411)

While elements of each of these are reflected in Henderson's (2010) review and Meyer's (2008) conceptual study, Smith (2012) focuses on the possibilities of transformation when the pedagogical strategies are fully embedded in the initial course design, not adapting transformative pedagogy to the online environment, but instead using the online environment in creative ways to foster transformative pedagogy. In her view, "the instructor must rethink his or her role in the transformative process by deliberately thinking through how to take advantage of the online environment to foster transformative learning" (Smith, 2012, p. 418). New contributions of Smith's article include how designers of online learning environments might successfully create the conditions in their very contexts for transformative learning.

The potential for the factors of transformative learning to be realized in an online environment in part rests on the technology that can support these pedagogical strategies. These types of transformative pedagogical activities must have virtual structures to support them. Although not directly related to transformative learning pedagogy, the Community of Inquiry framework seeks to establish virtual presences in order to create an environment supportive of these types of learning activities (Smith, 2012).

The Community of Inquiry Framework

The Community of Inquiry (CoI) framework is a model for fostering critical inquiry and higher order thinking among higher education students in a text-based, online

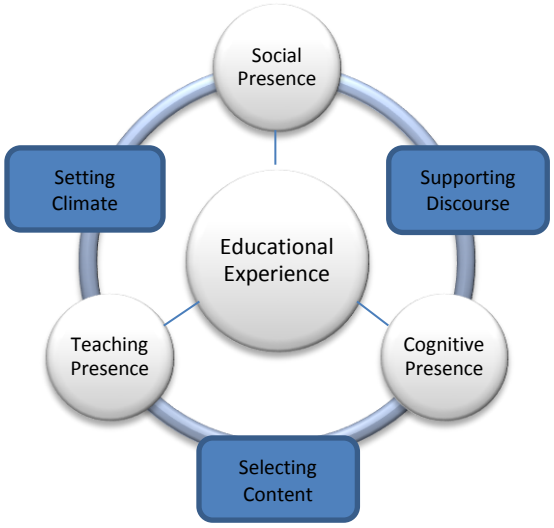
context (Garrison, Anderson, & Archer, 2000). A strength of the CoI model is its capitalization on the advantages of written communication in fostering critical thinking and learning—ample time for reflection, deep thinking, and achieving higher-order learning objectives (Garrison, Anderson, & Archer, 2000). The model is grounded in Dewey's (1959) educational philosophy of inquiry and community and in constructivist notions of learning. Further, the framework draws upon Lipman's (1991) work on the importance of a community of inquiry in facilitating critical thinking and Ramsden's (1988) claim that critical thinking is essential for deep and meaningful educational experiences. Garrison, Anderson, and Archer (2000) place high import on the opportunity to negotiate meaning, diagnose misconceptions, and challenge accepted beliefs within a community of inquiry. By facilitating this kind of experience, they assert that a community of inquiry is "a valuable, if not necessary, context for an educational experience if critical thinking is to be facilitated and deep learning is to be an outcome" (Garrison, Anderson, & Archer, 2000, p. 91). With this spirit of conviction, they propose a computer-mediated framework of learning based on three essential elements of a community of inquiry—cognitive presence, social presence, and teaching presence.

Cognitive presence involves the degree to which participants are able to construct meaning through sustained communication (Garrison, Anderson, & Archer, 2000). More specifically, the authors understand cognitive presence in a computer-mediated environment to follow a general model of critical thinking or inquiry, associated with a triggering event that is followed by exploration, integration, resolution, and warranted action. The second element of the framework, social presence, is the degree to which participants are able to present themselves and their characteristics to others in the

community (Garrison, Anderson, & Archer, 2000). Social presence is based on three indicators—emotional expression, open communication, and group cohesion. The authors connect emotional expression, particularly the capacity for expressing feelings related to the educational experience, to Brookfield's (1987) finding that critical thinking is facilitated by the socio-emotional support of others. In particular, they focus on the expression of humor and self-disclosure as factors that bring people together in a community. They also focus on open communication through mutual awareness and recognition of each other's contributions in order to develop and maintain relationships. The final element of the CoI framework, teaching presence, involves the design and the facilitation of the educational experience. More specifically, three indicators of teaching presence are instructional management, building understanding, and direct instruction.

Figure 2.3 represents the interrelatedness of the three core elements of the framework and how each comprises a piece of a community of inquiry in order to create a successful educational experience. The interaction between each element is identified as a specific action within the framework. The act of supporting discourse bridges the elements of cognitive and social presence; the act of selecting content bridges the elements of cognitive and teaching presence, and the act of setting climate bridges the elements of social and teaching presence. These acts connecting each factor in the CoI framework provide practical indicators of support for a learning experience through a community of inquiry in a computer-mediated environment.

Figure 2.3



The Community of Inquiry Framework

Since its initial development in 2000, the CoI Framework has generated substantial interest among online learning researchers (Arbaugh, 2008). In 2007, Garrison concluded that CoI research should move beyond exploratory descriptive studies to qualitative or quantitative empirical research. Using the CoI, Arbaugh (2008) found that while social presence is important, teaching and cognitive presences are the primary and complementary drivers of perceived learning among MBA students at a Midwestern U.S. university. In 2009, Akyol, Garrison, and Ozden found that social presence is developed successfully through self-disclosure, specifically sharing ideas and points of view, in an online classroom modeling the CoI. Additionally, a strong and active teacher presence that takes place at the beginning of an online course will foster a sense of student connectedness and learning (Akyol, Garrison, & Ozden, 2009). Results of a 2011 study by Zydney, deNoyelles, and Seo showed that a formal protocol to guide online interaction may evenly distribute cognitive, social, and teaching presences in the course. This is more reflective of the CoI Framework in that it emphasizes each of the

three presences in creating a community of inquiry. Formal instructions and protocols structuring discussion encouraged cognitive presence in that students made connections to other students' ideas. The supportive scaffolding of a protocol also sustained teaching presence when students could facilitate discussions themselves, thus increasing feeling of community in the group. Regarding social presence, the majority of social presence was in the form of open communication.

Constructivist-oriented pedagogical approaches, such as the Community of Inquiry, hold promise in online learning environments in particular, where complex barriers to collaborative and interactive learning continue to challenge practitioners and instructional designers. By focusing on ways that online learning can support constructivist pedagogy, models and frameworks of online learning can evolve to become more specific on what constructivist pedagogical structures are and how to enact them in the practice of online learning. This suggests a focused attention on both the epistemological and ontological nature of learning and the fundamental shift that may be required to engage, participate, and effectively learn in online environments. Paying attention to the ways in which adults make meaning in online environments and construct knowledge widens the view for a developmental perspective on how adults can successfully navigate the online learning context.

Conclusion

Adult educators have a responsibility for cultivating the conditions that support and challenge adults to learn and grow. This is particularly salient in a postmodern world, where an ever-changing landscape of higher education often pushes adults beyond their current developmental capacities. However, adult educators must find ways to

support adults in reconciling this mismatch between demands and capacities. Can adults successfully meet the current demands of online learning, or must they fundamentally change the ways in which they make meaning in order to keep up with and learn through the changing landscape of higher education? It is my hope that this study offers a perspective for addressing this concern and will in turn advance our understanding of adult learning in our current context.

CHAPTER 3

METHODOLOGY

The purpose of this study was to understand how adults construct meaning, develop, and grow within the context of an online, structured, educative space. The research questions guiding this study were:

1. How does an adult's developmental stage, or way of knowing, shape his or her online learning experience?
2. How do adults at varying developmental stages describe and understand the alone/together paradox in the online learning environment?
3. How, if at all, may an online, structured, educative space foster developmental shifts that will help adults meet the unique demands of online learning?

Design of the Study

This was a qualitative study grounded in a constructivist epistemology and framed from an interpretive perspective. The research approach applied a collective case study methodology (Stake 1995, 2000, 2005, 2006) and grounded theory methods of data analysis (Charmaz, 2000, 2006, 2011, 2014; Corbin & Strauss, 2008) in order to understand the developmental experiences of adults in the online learning environment.

Qualitative Research

Qualitative research is based on a holistic approach to describing and understanding a phenomenon (Fraenkel & Wallen, 2003). It aims "to achieve an understanding of how people make sense out of their lives, to delineate the process

(rather than the outcome or product) of meaning making, and to describe how people interpret what they experience" (Merriam & Simpson, 2000, p. 98). Researchers' inquiry approaches are based upon their theories of epistemology, or how knowledge is come to be known. This study was a qualitative study because I identify with "the key philosophical assumption upon which all types of qualitative research are based, [that] is the view that reality is constructed by individuals in interaction with their social worlds." (Merriam & Simpson, 2000, p. 97). Specifically in research, an epistemology clarifies the relationship between the inquirer and the known (Denzin & Lincoln, 2000), and philosophical beliefs about knowledge influence the study design from its inception. When designing this study, my choice of a qualitative inquiry approach went hand-in-hand with my view of how knowledge is created in the world.

Constructivist Epistemology

Epistemological beliefs "shape how the qualitative researcher sees the world and acts in it" (Denzin & Lincoln, 2000, p. 19). My epistemological beliefs align with constructivist ideals of how meaning and knowledge comes to bear in the world. Constructivism frames knowledge as something that is constructed rather than revealed (Lincoln & Guba, 2000). Further, it supports a belief that reality is constructed locally and specific to each individual (Crotty, 1998; Lincoln & Guba, 2000; Merriam, 2002). This view informed the purpose of this study, as I am seeking to understand how individuals at varying ways of knowing experience the online learning context. The literature shows that adults at each developmental level experience their learning and learning contexts in different ways. Constructivism allowed me to approach each individual's experience as true and unique to him or her, even if experiencing the same

context (Crotty, 1998). This supposition holds particularly strongly in light of my conceptual framework involving constructive-developmental theory. Since constructive-developmental theory explains the structures that shape individual meaning making, it follows that an epistemology supporting the very notion of individual meaning making undergirds the theory. The literature also shows that patterns exist in the way that learners at the same developmental level understand their experiences. Lincoln and Guba (2000) characterize the nature of knowledge according to constructivism as "individual reconstructions coalescing around consensus" (p. 166). Thus, constructivism also allowed me to look at many individuals' experiences for commonalities and consensus. Through a constructivist lens, I approached the research participants from the perspective that each individual experienced online learning in his or her own unique way. Exploring the phenomenon of meaning making within the context of online learning also shed light on the ways in which adults constructed that meaning.

Interpretivist Theoretical Perspective

Since meaning making is the central phenomenon I studied, additional philosophical perspectives on meaning construction strengthened the methodological design and theoretical framework of this study. While constructivism lent a way of understanding participants' experiences, I called on interpretivism as a way of translating those experiences into meaning within a research paradigm.

Interpretivists view human action as inherently meaningful and emphasize the human subjectivity of knowledge (Schwandt, 2000). In other words, interpretivisim looks at the meanings behind a particular social action in order to gain fuller understanding. However, in research, meaning is filtered from participant to researcher

and cannot be directly observed, only interpreted (Haverkamp & Young, 2007). "To find meaning in an action, or to say one understands what a particular action means, requires that one interpret in a particular way what the actors are doing" (Schwandt, 2000, p. 191). In a sense, interpretivism is a way of thinking about how to translate participants' actions, language, and dialogue into meaning. In the design of this study, an interpretivist perspective allowed me to make claims based on participant contributions and reports on experiences.

Combining constructivist epistemology and interpretivist philosophy is a common approach in qualitative research (Merriam & Simpson, 2000). Given the subject of my research study, the idea that adults can experience the context of online learning in different ways lent itself to a constructivist paradigm. An interpretivist perspective allowed me to use the subjective experiences of the research participants to understand their meaning making. Crotty (1998) asserts that

> Research in the constructivist vein requires that we may not remain straight-jacketed by the conventional meanings we have been taught to associate with the object. Instead…approach the object in a radical spirit of openness to its potential for new or richer meaning. It is an invitation to reinterpretation. (p. 51)

For this qualitative study, a constructive epistemology and interpretive theoretical perspective enabled me to fully explore new and richer meanings of how adults experience online learning.

Methodology and Methods

The congruence between the interpretive/constructivist paradigm and qualitative inquiry offered a path toward an in-depth understanding of how adults brought

themselves developmentally to online learning and how their developmental levels influenced their learning experiences in this particular context. However, this connection between epistemological and theoretical perspectives and strategies of inquiry was only the first step in the research design; the second step was establishing that connection to methods for collecting empirical material (Denzin & Lincoln, 2000). Building upon the considerations of knowledge, meaning, and interpretation laid out in the above sections, I integrated a collective case study methodology (Stake, 1995, 2000, 2005, 2006) and grounded theory methods (Charmaz, 2000, 2006, 2011; Corbin & Strauss, 2008) in order to address the research questions.

Case study methodology. A case describes a bounded system made up of varying integrated parts (Stake, 1995). By focusing attention on the object of a case rather than the process, a researcher seeks to understand how it functions (Stake, 1995). A case study approach to inquiry can either be placed in the positivist/post-positivist tradition or interpretive/constructivist tradition, depending on the researcher's view of reality and representation. Stake's (1995, 2000, 2005, 2006) case study methodology is congruent with the epistemological and theoretical perspectives of this study and served as the guiding strategy for designing sample selection and data collection. Stake's (2006) work on collective case studies in particular highlights the multiple perspectives of participants, seeking mutually agreed upon experiences and actively constructed understandings of the participants.

This research design utilized a collective case study, also referred to as a multicase study (Stake, 1995, 2005, 2006). In a collective or multicase study, the researcher examines something having multiple cases, parts, or members (Stake, 2006).

A collective case study allows the researcher to analyze a case both within one setting and then across settings. Stake (2006) refers to this collection of cases creating a whole as a "quintain." Further, "the quintain is something that we want to understand more thoroughly, and we choose to study it through its cases, by means of a multicase study" (Stake, 2006, p. vi). In this design, I treated each participant as an individual case to understand adult learning and meaning making in various online, structured, educative spaces. When analyzed individually and then viewed collectively, these participants or cases came together in a quintain to reveal similarities within and differences between participants at different developmental stages in how they experienced online learning.

In this collective case study, cases were adult graduate students (both masters and doctoral degree-seeking) who had taken at least one fully asynchronous online course that employed transformative or developmental pedagogical structures as determined by the course instructor or participant or evinced by the course syllabus. Courses were designed in a deliberately developmental way—that is, the intention of the course was to provide students with experiences to foster their growth and development. While the course provided a bounded system and structure, adult growth and development within the context was the phenomenon being studied.

When undergoing case study, Stake (1995) suggests outlining main "issues" of a case in order to clarify the complexity and the contextuality of the phenomenon being studied. "Issues draw us toward observing, even teasing out, the problems of the case, the conflictual outpourings, the complex backgrounds of human concern" (Stake, 1995, p. 17). From a synthesis of the literature, and considering the phenomenon of online

learning from a constructive-developmental perspective, I identified four issues that will guided this research initially. These issues are summarized in Table 3.1 below.

Table 3.1

Initial Issues Guiding Research

Issue 1: Developmental Plurality	As adults grow in their development, they "show up" in classrooms at varying stages of development or points in their meaning systems. Constructive-developmental theory allows us to consider the developmental plurality of learners (adults at varying developmental levels) and how they make meaning of their experiences and their learning.
Issue 2: Online Holding Environments	Research shows that the learning environment can be a holding environment, a nurturing context out of which a person can grow, and that with the appropriately high challenges and high support, adults can experience developmental shifts in a learning context. How this translates to an online learning context, however, remains to be studied in-depth.
Issue 3: Developmental Pedagogical Structures	Instructors may design their online courses in deliberately developmental ways in order to encourage transformative learning and foster development and growth. These structures vary across courses, and they may or may not address the inherent supports and challenges of the online holding environment. How can we build the structures and create the conditions within the online learning environment so that adults can learn through the online context?
Issue 4: Managing the Alone/Together Paradox of Virtual Connectedness	Human beings experience a sense of "alone/togetherness" when communicating and connecting to each other through technology, and advances in technology are outpacing our reflexive capabilities to make sense of our virtual connectedness. This phenomenon remains to be explored in the online classroom, and the implications for learning – and the learning structures that may foster these reflexive capabilities – may be explored through online learners' experiences and sense-making.

These issues served as points of departure (Charmaz, 2006) to guide data collection and analysis. By treating these issues as points of departure rather than predetermined destinations (Lauckner, Paterson, & Krupa, 2012), I was able to remain open to what emerged from the data and bend toward how these issues may develop over the course of the research. According to Stake (1995), as a researcher gains a deeper understanding of the case and the phenomenon, these issues often evolve from what the researcher initially understood them to be, and they are influenced by the understandings created by the research participants. While these issues guided beginning data collection, I also used grounded theory methods to encourage a spirit of openness, exploration, and discovery with the data.

Grounded theory methods. Research design also concerns "what information most appropriately will answer specific research questions, and which strategies are most effective for obtaining it" (LeCompte & Preissle, 1993, p. 30). Looking specifically at research strategies for data analysis, grounded theory methods (Charmaz, 2000, 2006, 2011, 2014; Glaser & Strauss, 1967; Corbin & Strauss, 2008) were the most appropriate for this study. Although this design was not intended to generate new theory, grounded theory as an approach to the analysis of data has been enormously influential in qualitative inquiry, and this approach "has also been taken up by qualitative researchers who may not situate their studies as contributions to grounded theory work" (Roulston, 2010, p. 155). The research questions guiding this study were well suited to the inductive and generative data collection and analysis methods of grounded theory. In addition, grounded theory is "particularly useful for qualitative psychologists who study topics such as self, identity, and meaning" (Charmaz, 2011, p. 167). This research topic as it is

situated in the larger field of adult education and learning benefitted from this particular approach as well, as "grounded theory…has been effectively adopted for the study of a wide range of issues and problems within adult education" (Babchuk, 1997, p. 260).

While grounded theory methods have always challenged the current, dominant state of scientific inquiry that privileged quantitative studies over qualitative research, early grounded theory methods framed research in a somewhat positivist manner. However, a new generation of grounded theorists has amended these epistemological assumptions, and this methodology will draw on these later interpretations. Corbin and Strauss (2008) propose giving voice to their respondents and their views of reality, particularly when those views conflict with the view of the researcher (Charmaz, 2000). In her own words, Corbin places her view in agreement with constructivism, that "concepts and theories are constructed by researchers out of stories that are constructed by research participants who are trying to explain and make sense out of their experiences and/or lives, both to the researcher and themselves" (Corbin & Strauss, 2008, p. 10). She articulates that it is "out of these multiple constructions, [that] analysts construct something that they call knowledge" (Corbin & Strauss, 2008, p. 10). Thus, Corbin distinctly opposes the positivist view of the researcher as a neutral observer who discovers reality (Charmaz, 2000) to embrace a view of reality as co-constructed by grounded theorists and their research participants. This aligns with the philosophical hermeneutics view of knowledge and meaning that informed the design of this study. The constructivist perspective that Corbin brought to the study of grounded theory has aided its evolution in qualitative studies and guided the data collection and analysis steps of this study.

Participant Selection

The unit of analysis for this case study was the individual student who had taken an asynchronous online course. "This means that the primary focus of data collection will be on what is happening to individuals in a setting and how individuals are affected by the setting. Individual case studies and variation across individuals focus this analysis" (Patton, 2002, p. 228). The setting was various asynchronous, fully online courses according to Allen and Seaman's (2011) definition stipulating that at least 80 percent of the course material is delivered online. The setting for this study was courses at various institutions that were somehow developmentally informed—that is, instructors intentionally structured their courses to encourage transformative learning, growth, or development. These pedagogical structures included, among others as determined by course instructors, critical reflection, reflective discourse, opportunities for action, focus on relationships and support, and the use of complex problems and issues (Henderson, 2010; Keegan, 2011; Merriam, 2004; Smith, 2012). The subject of these courses varied across fields, and participants referenced multiple courses during the interviews.

To recruit participants, I sought instructors teaching virtually through criterion sampling (Patton, 2002) according to the inclusion criteria outlined above. I first inquired with faculty in the Lifelong Education, Administration, and Policy department at the University of Georgia about courses and instructors they knew of that met these criteria. I also inquired about these courses to both instructors and students at the 2014 International Transformative Learning Conference and on the Transformative Learning Conference Facebook page. I also used snowball or chain sampling (Patton, 2002) to continue exploring potential sites and participants for this study.

This research involved seven participants who completed or were enrolled in a deliberately developmental online course. The number of participants in this study evolved to seven in order to allow for saturation and to keep the amount of data collected at a manageable level for a dissertation-length study. As I collected and analyzed participant data, I looked for signs of redundancy in responses and potential saturation, then stopped recruiting and interviewing participants at that point. I originally recruited six participants, but after completing data collection for those six, I recruited one more participant from a different institution type and degree program to confirm saturation for online learning experiences. For this study, it was preferable that participants be at different developmental stages according to Kegan's (1982, 1994) orders of mind. In order to be able to fully address the first research question, how does an adult's developmental stage, or way of knowing, shape his or her experience in an online learning environment?, then participants, as a group, would represent developmental plurality at least across two stages.

I found participants who met these specific parameters through individual invitations to students and through course instructors who agreed to share my study invitation with their students. I solicited initial participants with an e-mail message or verbal invitation describing my research purpose, explaining the time commitment, and asking for research volunteers. I opened the invitation to those students who were willing to participate in both the developmental assessment interview and the subsequent semi-structured interview. Out of the seven participants, I recruited two by direct personal invitation, four through e-mail invitations distributed by course instructors, and one from an inquiry on the Transformative Learning Conference Facebook page that led to a

personal email invitation. When course instructors distributed my invitation to their students, I did not share with those instructors who, how many, or even whether any of their students chose to contact me or participate in the study. This was to ameliorate any concern about potential coercion and to preserve participants' confidentiality.

Participant Profiles

This study involved a diverse group of seven participants that included different genders, races, ages, geographic origins, professions, and graduate degree programs. These participants were all highly educated and pursuing advanced degrees. They were each masters or doctoral students enrolled in different types of graduate programs, and the four institutions they attended varied widely to include a small private graduate university, a well-established for-profit online university, a large private university, and a large public university. In addition to demographic and educational diversity, the participant pool represented a range of developmental stages between Stage 3 (socialized way of knowing and Stage 4 (self-authored way of knowing). Large-scale studies (Cook-Greuter, 1999; Kegan, 1994; Torbert, 2004; Rooke and Torbert, 2005) based on thousands of individuals have determined that most adults make meaning according to the structures of Stage 3 and Stage 4, or somewhere in transition between the two. Between the seven participants, two were fully socialized knowers (Stage 3), two were socialized knowers beginning transition into self-authorship (Stage 3(4)), one was in transition between socialized knowing and self-authorship with self-authorship dominating slightly (Stage 4/3), one was almost fully self-authored (Stage 4(3)), and one was fully self-authored (Stage 4). These developmental stages, along with demographic and institutional data, are represented by participant in the table below and discussed in

the participant profiles in the remainder of this section. All participants are referred to in this study by pseudonyms, either of their own choosing or if they had no preference, assigned by me.

Table 3.2

Participant Profile Summaries

Name	Gender	Age	Graduate Degree Program	Institution Type	Stage of Development
Karen	Woman	53	Ed.D., Educational Leadership	Private graduate university	3
Lindsey	Woman	39	Ed.D., Adult Learning and Leadership	Private university	3
Cherita	Woman	38	Ph.D., Higher Education	For-profit online university	3(4)
Leigh	Woman	25	M.Ed., Human Resources and Organization Development	Public university	3(4)
Maxim	Man	32	Executive M.S., Technology Management	Private university	4/3
Sara	Woman	32	M.Ed., Organizational Psychology	Private university	4(3)
Ben	Man	46	M.Ed., Adult Education	Public university	4

Karen

Karen was a 53-year-old woman living and working in the Midwestern United States. She was an academic technology specialist at a large public university and had worked in higher education most of her professional life. She had degrees in German

language and literature and computer science. Karen told me, "I've always straddled between international language and technology. So sometimes I've had a job that's just been all one. Sometimes I've had a job that's been all the other, and when I'm in my sweet spot, I have a job that's both." Karen's interest in computer science and learning technology made her comfortable taking online courses, and she chose a distance-based degree program to fit in with her life as a working professional, wife, and mother of two adult children. She was pursuing an Ed.D. in educational leadership at a private graduate university.

I scored Karen's SOI at Stage 3, which means she was fully making meaning at the socialized stage of knowing. Karen's identity was embedded in the academic structures of her career and education and in her family roles as well. Getting a doctoral degree was important to Karen because it meant she would gain respect at work and in the eyes of her co-workers, superiors, and family members. Karen's structure of meaning was revealed in the following exchange, when I asked her about her perseverance in her doctoral program:

> Interviewer: What would be the worst thing about not finishing this degree?
>
> Karen: Disappointed in myself...you let yourself down. You let everybody else down. That would be a thing that would be in the mirror every day and I wouldn't be able to—that would be hard. That would be hard to tell my colleagues I gave up, tell my family I gave up. No, no, no. That's awful. I can't do that.
>
> Interviewer: And which is worse for you—the looking in the mirror and disappointing yourself or disappointing your family and colleagues?

> Karen: Oh, gosh. I have to pick one over the other? Oh. I don't—those are pretty intertwined I would say. I don't—I don't see a strong one over the other. Probably myself because I ultimately know that—well, letting myself down, them down. I don't know. I—myself—I mean, it's my degree. It's my choice and ultimately they would all say you have to do what's right for you.

Her sense of self was constructed her relationships with those closest to her, so much so that she could not tease out her feelings for disappointing herself and disappointing others; in her words, they are "intertwined." I experienced Karen as completely dedicated to her family as well as her studies; one of Karen's most admirable qualities was her intense desire and dedication to working toward her doctoral degree.

Lindsey

Lindsey was a 39-year-old Ed.D. student at a private university in the Northeastern United States. She had gotten her masters degree in adult learning and leadership at the same institution and decided to pursue her Ed.D. after the organization she worked for offered to pay her tuition. Some of her courses in her doctoral program were online and some were in person. Lindsey had a background in voice and opera performance and got her bachelors degree in music before entering the workforce as a human resources trainer for several different corporations. Lindsey was married, had three young children, and worked full time in addition to pursuing her Ed.D.

I also scored Lindsey's SOI at a Stage 3 way of knowing. During our interview, she expressed an orientation toward authority and power that was external. She also had a intense drive for being "the best" parent, manager, and student possible, often according to standards set in parenting books, by her boss and employees, and by her instructors. In

the following example, Lindsey's identity was externally constructed based on her elders' views:

> So I feel like I have to—I've always been told, "You're an immigrant. You have to represent and be what—do well, and by the third generation, immigrants are very successful and they are not in need anymore so you have to work harder. You have to be better than the American, better than the average American and be the highest performer always." So I have that internalized. I cannot be poor. I cannot be in want. I have to be the best.

Lindsey internalized the values of her culture, and although she was aware of what they were and where they came from, she did not hold them as object or integrate them into a meaning system she created for herself. Lindsey wanted to be "the best" for her children and her family, and I admired her drive and ambition. She told me a story her mother often told her about the ant and the grasshopper. The grasshopper would sing and play his guitar all summer, while the ant would be working and gathering food. Come fall, the ant would have enough food for the fall while the grasshopper would suffer. Her mother would ask her, "Do you want to be like that, have no food come fall? Or do you want to be gathering and doing that while other people are sleeping?" Lindsey's values for hard work, achievement, and success were evident throughout her interview.

Cherita

Cherita was a 38-year-old stay-at-home mother and full-time doctoral student living with her husband and young daughter in the mid-Atlantic United States. Cherita had an academic background in chemistry, microbiology, and immunology, and she had a professional background teaching various science courses at nursing, for-profit, and

community colleges. She was pursuing a Ph.D. for better career opportunities in higher education. Just a few months before I first spoke with Cherita, she had been let go unexpectedly from her job in an organization leading learning programs, and she was still trying to reconcile her experience. We spoke about it extensively, her making sense of it even through our conversation months later and what it meant for her family and her sense of identity. I experienced Cherita as a hard-working student who loved learning and a devoted wife and mother who made the best of her unemployment situation by spending as much time with her family as possible.

Cherita's SOI score indicated she made meaning just beyond the socialized way of knowing at Stage 3(4). In most instances, she made meaning at Stage 3, often relying on her professors and workplace evaluations to judge her performance and success. However, she had begun to demonstrate some capacity for self-authorship, mainly in the way she was recognizing her old habits of mind around losing her job and struggling to break free of those. I asked her what the worst thing was for her about being let go:

> I think the self-doubt and insecurity will have a long-lasting effect on me. It was a lot of insecurity, like, "Well, what did I do wrong? What could I have done differently?" Coming to grips with—that it wasn't my fault…but it wasn't my fault. It wasn't my problem. But there's still self-doubt there that will come up again when I am actively looking for new positions.

Cherita's ability to reflect on her self-doubt and hold it as object illustrated her beginning capacity toward self-authorship. Her acknowledgement that it came back when she was looking for new positions illustrated she was still subject to it in moments of stress and challenge. This was a prime example of the transition Cherita was currently experiencing

of constructing a sense of her self based on her current situation, others' views, and previously held assumptions about losing a job, and a new sense of self she was constructing that could reconcile the experience of losing a job and being self-confident.

Leigh

Leigh was the youngest participant in this study at 25 years old and was completing her master's degree in Human Resources and Organization Development at a large public university in the South. She worked full-time while getting her degree and had a professional background in administering learning management systems and creating online training content. She had a full schedule and worked hard, taking on a part-time internship in the organizational development field while she was working and going to school, just to gain experience in the field. Leigh had grown up in the town where she had gotten her undergraduate degree and attended graduate school at the same institution. We spoke at length about her competing desires to stay in her hometown close to family and friends and her desires to move away for new experiences and opportunities. I experienced her as being torn between staying comfortable in her current environment and wanting to grow in a new one.

Leigh's SOI score reflected these unintegrated and unresolved desires. I scored Leigh's SOI at a Stage 3(4), and a second certified SOI rater also scored Leigh at Stage 3(4) for the purposes of inter-rater reliability. She made meaning predominately at the socialized stage but also held some early capacity for self-authorship. She reflected on the limits of her current way of knowing during our conversation, namely that by pleasing others, she may no longer be pleasing herself. She had begun to construct an

identity outside the expectations of others, but she did not yet have the capacity to act on it:

> Over the last few months to the last year, I've become I guess more—not necessarily open with people but open to possibilities and opportunities. And so I'm willing to do more for me and think about what's best for me than I am necessarily thinking about well, how is that going to affect others first. So I guess I'm more focused on me even though that's not really great. [Laughing] But yeah, I've just become more determined to get what I want and work toward what I want, and I'm not as afraid of the word "no" now than I was.

This beginning awareness was Leigh's emergence of a newly self-authored way of knowing.

Maxim

Maxim was a 32-year-old man living in the Southeast and attending a graduate program remotely at a large private university in the Northeast. He completed an International Baccalaureate in India and an undergraduate degree in computer science and an MBA in the United States. At the time of our interviews, he was completing an executive master's degree in technology management while working full-time in product development for the technology industry. He had been in the workforce for about six years and entered this master's program to complement his industry learning with academic learning and improve his chances on the job market.

Maxim's SOI score was in between Stage 3 and Stage 4, with Stage 4 slightly dominating (4/3). An independent certified SOI scorer also confirmed this score for the purposes of inter-rater reliability. A developmental score of 4/3 indicates that Maxim

was between a socialized and self-authored mind, with a capacity toward greater self-authorship. A good example of his transition between socialized and self-authorship was his perspective on getting good grades:

> Interviewer: Can you imagine a different way of—or a different feeling about grades being important even if they're not important for getting a job?
>
> Maxim: Yeah. And so, frankly for me, I don't get upset if someone gets a better grade than I [do]. …But I think it's some kind of respectability, like you don't want to let the teachers down. Because if I like the professor and I respect the professor, I don't want to get a bad grade in that great professor's class because I feel like I let somebody down. …[If] you get a D, it looks like you've been lazy and you haven't paid enough respect for them…it's a mutual respect, I believe, to get a good grade.
>
> Interviewer: Oh, that's really interesting…I think others may feel differently, that they don't want to let the professor down because they're afraid of what the professor might think of them.
>
> Maxim: Yeah, I think that that's there as well to some extent… It may have been true in the past, but not in the past few months.

Maxim recognized an old habit of mind (i.e. getting a good grade to please your professor or get a job) that was becoming obsolete for him in his present way of knowing. He articulated a relatively new perspective on why he put forth the effort to get a good grade, while also acknowledging that an old perspective still lingered, although was becoming less true for him. In this exchange, Maxim's meaning making structure revealed he had

moved out of a socialized way of knowing and into a more self-authored way of knowing.

Although Maxim's self-authorship had become his more dominant way of knowing, he still had capacities for and acted out of a socialized mindset in certain situations. His way of knowing was dependent on his context. Research supports the notion that individuals do not always act out of their latest developmental stage and meaning making can be contextual (McCallum, 2008; Livesay, 2015; Smith, 2016). In some contexts Maxim operated from a socialized order of mind, particularly around issues of conflict and relationship, and in other contexts he operated from a self-authored order of mind, particularly around issues of performance and values. In a follow up member check, Maxim confirmed that he felt he was moving toward self-authorship, with his goal "to be more comfortable with offering my views, even if they are counter to the rest of the group," and he also suspected his mindset was different at work and at school. Indeed, the SOI and subsequent interview data confirmed it was different; he made meaning in the online environment from a socialized mindset and in other academic and professional environments from a self-authored mindset. For this reason, in the findings of this study, Maxim is included as a socialized knower when it relates to his experiences in the online environment and as a self-authored knower when it relates to his experiences in other academic and professional settings.

Sara

Sara was a 32-year-old full-time student in a master's program for organizational psychology at a large private institution in the Northeastern United States, where she also lived with her husband. Sara was originally from the Great Lakes region of the United

States and went to a small parochial school where there were nine in her class. She moved to a larger public high school and then attended the largest public university in her state. In her words, she "kind of kept moving to bigger and bigger playgrounds. And at least the last one was intentional. [I] just really wanted to kind of get out of my small town." Sara's academic background was in Spanish and social welfare, and a college study abroad experience in Spain sparked her love for big cities, which is why she settled in the large urban area she did. I experienced Sara as reflective, a little overly critical of herself, and yet consistently putting herself out there and developing her growth mindset (Dweck, 2006). At the time of our interview, Sara was networking and interviewing with companies for a full-time position after she graduated.

Sara's SOI reflected that she was almost fully self-authored, and I scored her SOI at Stage 4(3). This score reflects her capacities for self-authorship in almost every context and relationship, except a few instances, namely under moments of social anxiety and in her relationship with her sister. However, in the vast majority of situations we explored, Sara was able to take perspective on herself, others, cultures, and systems. Sara displayed her almost-fully self-authored perspective when she told me about struggling to be comfortable talking about her accomplishments in interviews:

> I'm originally from [a Great Lakes state] and I feel like back home, you don't—it's a total no-no to pump yourself up, like, "I did this and I did this and I did this." And the interview process, just in general I feel very—I haven't found a good way talk about my experiences in a way where I don't feel I'm bragging…I just need to get over it.

Sara clearly recognized a formerly embedded habit of mind she once held "back home" but that no longer served her. She also recognized there could be a way to speak about her accomplishments without sounding boastful. All she was lacking was the skillset to do so; her mindset had already shifted to a self-authored way of knowing.

Ben

Ben was a 46-year-old IT director living in the Southeast with a rich and varied academic background. He had degrees in physics, music, educational research and psychology, and at the time of our interview he was simultaneously pursuing an online master's degree in adult education and doctoral degree in music. He also worked full-time leading an IT organization at a large public research university. He thought being involved in the arts was an important balance to the amount of time he spent surrounded by technology in his professional life. He told me he would always be learning and be a student of some kind. Ben was married, an animal lover, and involved in many hobbies. I experienced Ben as intelligent and driven, and I admired the earnestness with which he led his organization and pursued self-development.

Ben's SOI score indicated he made meaning at Stage 4 and had the full capacity for self-authorship. In multiple contexts and across many scenarios, he made decisions based on his own integrated values and judgments. One salient example was when he described how he thought about resolving a current conflict with his brother:

> Ben: So on the one hand, I would take—there's a strong feeling to take my dad's path, which is that of a peacemaker and to justify it in a way that I've described. But I'm trying to summon the courage, I guess, to go down the other path, which

is probably more what my mom would want. So that's kind of my thinking…I don't know that I've come to the core of it yet.

Interviewer: How do you imagine you'll know which path to choose?

Ben: I don't know how I'll know. I think it's going to come down to a moment when it's time to make a decision and I'll make it and go with it. And I'll know it's the right one simply because I've decided that's they way I want to go.

In this exchange, Ben clearly saw and took multiple perspectives into account but ultimately would make a decision based on his own sense of what should be done. As he said, he knows it will be the "right" decision because it is the one he has authored himself.

Data Collection and Analysis

Patton (2002) encourages scholars to ask, "What data will answer or illuminate the inquiry questions?" (p. 13) when considering which research methods to use. In thinking about the data that best answered the research questions, qualitative methods would yield thick, rich data. Such data are ideal to understand fully and deeply adults' online learning experiences. In this study, data collection methods included a cognitive developmental assessment through a Subject-Object Interview and a semi-structured interview that included a visual sense-making activity called polarity mapping.

Data collection and analysis were also informed by grounded theory methods. Both the beauty and the limitation of grounded theory lie in the wide interpretation of data collection and analytical methods it affords researchers. Since Glaser and Strauss, other grounded theorists have amended their methods based on evolving epistemological assumptions, but certain techniques of grounded theory as a research method still hold.

As Stern (2009) advocates, "variations on grounded theory are all well and good, but it is important to understand the original concepts; the most vital of these may be constant comparison until the researcher finds a theoretical code that has fit and grab" (p. 61). I used these original concepts, including inductive coding and constant comparison analysis, as well as memo writing, to analyze the data. I have integrated the data collection and analysis phases in this section and will address each approach based on the two kinds of interviews.

Developmental Assessment: The Subject-Object Interview

Collection. The first stage of data collection involved a Subject-Object Interview (SOI), a measure designed to assess an individual's developmental stage based on Kegan's (1984, 1992) constructive-developmental theory. I chose to use the SOI because "it is theoretically the most elegant and methodologically the most differentiated of the theories and measures" (Torbert, 2014, p. 3), it allows for deep exploration of a person's meaning making through conversation with the interviewer, and it most closely aligns with the developmental schema as outlined by Kegan's (1982) taxonomy. The SOI is a 60-90 minute semi-structured interview where participants respond to ten prompts for real-life experiences and the interviewer follows up with probes to determine the structures by which the participants make meaning (see Appendix A for the detailed protocol and prompts). I administered, analyzed, and scored an SOI for each participant through a formal research procedure (Lahey, Souvaine, Kegan, Goodman, & Feliz, 1988). To ensure that this process was valid and reliable, I was trained in the administration and analysis of the SOI and subsequently certificated as a reliable scorer.

Analysis. The Subject-Object Interviews were transcribed, and in order to preserve confidentiality of the participants, each participant given a pseudonym (either of their own choosing, or if they had no preference, assigned by me). All identifiable data (names, places, etc.) were scrubbed from the transcriptions. The portions of the interviews where developmental structures arose were the units of analysis. I analyzed these units individually and then arrived at an overall score through a uniform process that reflects the participant's developmental stage. Lahey, Souvaine, Kegan, Goodman, and Feliz (1988) suggest that in order to establish reliability in scoring (defined as agreement within a single substage on either side of the original score), researchers should check twenty percent of their scores against those of another trained SOI scorer. I shared two out of the seven SOI transcripts with another trained SOI scorer to establish inter-rater reliability, and we both arrived at the same developmental score for each transcript. The results of the SOI scoring process revealed students' developmental stages and informed analysis of their experiences in the online learning context. More specifically, my analysis of participants' developmental scores helped determined patterns that existed among individuals at certain stages and the ways they described their online learning experiences.

Semi-structured Interviews

Collection. After a Subject-Object Interview, I asked participants to engage in an approximately 60-minute semi-structured interview that was digitally audio recorded. This interview focused on participants' experiences of online learning and had two parts: (1) verbal reflections on moments of support, challenge, connection, and vulnerability, and (2) a visual mapping process called polarity mapping (Johnson, 1992; Emerson,

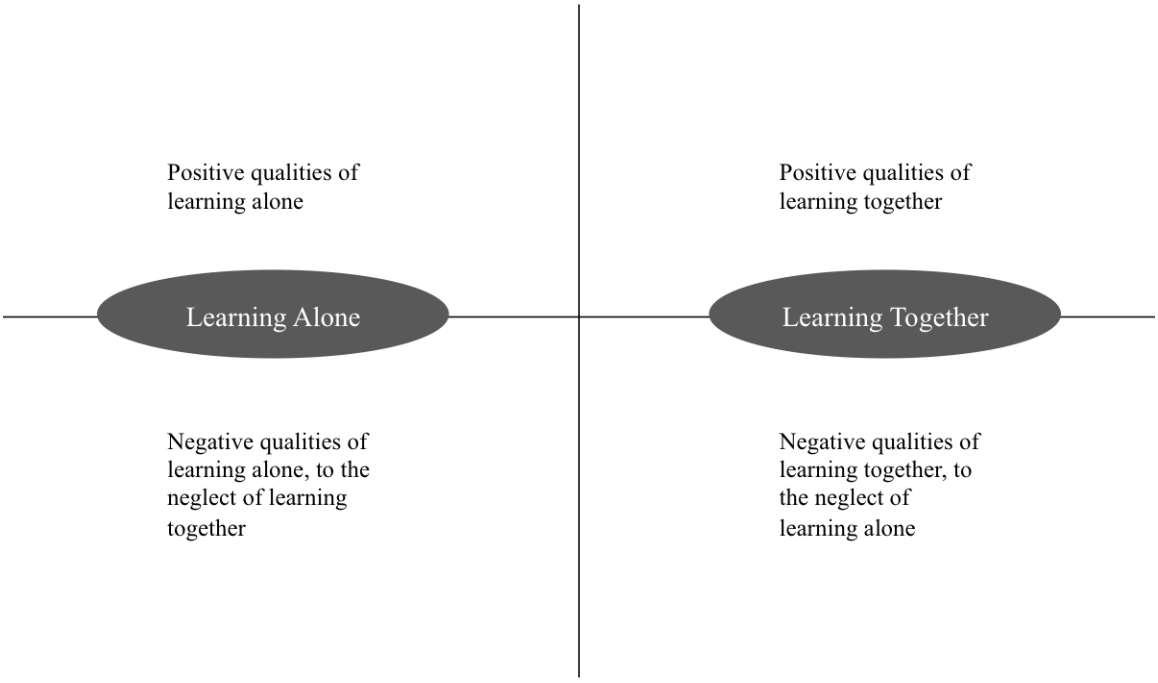
2013) exploring the dynamics of learning alone and learning together in an online context. The semi-structured interview protocol is included as Appendix B. The interviews took place via video chat and phone for the majority of participants who were geographically distant and occasionally in person when the participant was geographically close.

I followed a general interview guide approach (Patton, 2002) to structure the interviews and collect data. I used this particular approach in a pilot interview study under a class IRB to make sure I followed the same basic lines of inquiry with each interview participant. In the pilot study, I conducted in-depth, hour-long interviews with three adults currently enrolled in different graduate programs within a college of education who had previously participated in an online course. Through these interviews I probed the general topic of online learning with questions about how participants' online learning experiences were structured, how they interacted with others in the online environment, how they felt about their experiences, and what they liked and disliked about online learning. Using a general interview guide lent structure to the interview but still allowed me to "explore, probe, and ask questions" within each particular topic area in order to "elucidate and illuminate that particular subject" (Patton, 2002, p. 343). I chose this approach over an informal, conversational interview or an open-ended interview to keep the interviews topics and time lengths of each conversation consistent and because the research questions led me to look for specific aspects of adults' online learning experiences. This approach worked well in the pilot study, and I used a similar approach in this study.

I also collected visual data in the form of a polarity map to further explore the alone/together paradox of technical connectedness. Polarity mapping (Johnson, 1992) is both a tool and a sense-making process that helps individuals and groups outline and manage the relationship between interdependent and opposite constructs, often conceived of as polarities and paradox (Emerson, 2013). The terms polarity and paradox have been adopted and used by both practitioners and scholars to name this same relationship (Johnson, 1992; W. K. Smith & Lewis, 2011). In this dissertation, I use the terms polarity and paradox interchangeably to describe an interdependent pair of opposites that is necessary and desirable over time in order to successfully support a common purpose (Johnson, 1992; Sharma & Cook-Greuter, 2010). Given this definition, the phenomenon of the alone/together paradox of technical connectedness (Turkle, 2011) may be framed in the context of learning through technology as a polarity of learning alone and learning together to further illuminate how adults navigate this relationship.

The polarity mapping process involved setting up each pole on opposite sides of a quadrant, with space for positive attributes on the top row of the figure and space for negative attributes on the bottom row. The participant was asked to draw this figure on a piece of paper in front of them, and then I took them through each quadrant and asked them to write their thoughts in those spaces. For each of the quadrants, the participant shared their views of the positive and negative qualities of learning alone and learning together (to the neglect of the other). See Figure 3.1 for a blank polarity map. Through this sense-making process, I gathered data that added another dimension to how online learners perceived the alone/together paradox.

Figure 3.1



Blank Polarity Map for Learning Alone and Learning Together

Analysis. In this study, I followed Charmaz's (2000, 2011, 2014) guidelines of grounded theory coding to identify the social and psychological processes participants experienced in the online context through an iterative and emergent analytical process. I used NVivo qualitative data analysis software to manage the semi-structured interview transcripts and codes. Analysis of the semi-structured interviews began with a scan of the raw data (LeCompte & Priessle, 1993), keeping in mind the research questions guiding the study. After my initial reading of each transcript, I began creating focused codes (Charmaz, 2014) by highlighting relevant text and pulling out repeating ideas (Auerbach & Silverstein, 2003). I coded in chunks and short fragments of data that ran multiple lines, depending on the continuity of ideas my participants expressed. In this way, I used coding as "a heuristic device for becoming involved in the analysis, shedding…preconceptions, and seeing the data anew" (Charmaz, 2011, p. 172). This

process of delineating codes from raw qualitative data made me an instrument in the analysis, creating codes both with and from the data. Becoming close to the data was important foundational work (Corbin and Strauss, 2008) in order to construct categories in subsequent rounds of analysis.

As I coded the interviews, I referenced earlier codes to both compare and contrast data with data according to grounded theory method (Charmaz, 2014). Also known as the constant comparative method (Corbin & Strauss, 2008), this strategy helped me collapse codes and distinguish among others. After this process I had identified 217 distinct codes. The use of comparison moved the analysis from a level of description to abstraction, helped me see variation and patterns in the data, and drew me even closer to interpreting the meanings of my participants. Once I was able to see these variations and patterns among codes, I created tentative categories in the data (Charmaz, 2014). I grouped together tentative categories that were similar to one another under higher-level concepts, and then compared these concepts to other broader concepts for the purposes of constructing six major categories of findings (Corbin & Strauss, 2008).

Charmaz (2000, 2014) recommends memo writing aimed at the construction of conceptual analysis as a simultaneous step in grounded theory analysis. In tandem with coding, I integrated memoing as a sense-making and reflective tool to refine and focus codes and to elaborate and check theoretical categories. Memo writing offered me the opportunity to explore, define, and analyze the codes and theoretical categories I had begun developing to offer further understanding and refinement. Memoing allowed me to navigate through the data in such a way that I could simultaneously make sense of them and remain open to what was emerging. It was through memo writing that I

understood what Kathy Charmaz meant when she said, "Coding can be magical, not merely mechanical" (personal communication, July 28, 2016). I used memo writing throughout data collection and analysis in order to explore hunches, discover new revelations, deepen my understanding of participants' meanings, and develop categories into findings.

Ensuring Quality

I took several measures to show quality (Roulston, 2010) in this qualitative study. The first was preserving internal validity, or tending to the issue of how well research findings align with reality (Merriam, 1998). One means for establishing internal validity in qualitative inquiry is to triangulate data so that multiple investigators, sources, or methods confirm findings as codes and categories emerge (Merriam, 2002; Patton, 2002). I used triangulation through two interviews (the SOI and the semi-structured interview) in three parts (developmental assessment, learning reflections, and the polarity map) in order to gather data through multiple dimensions from each participant. During analysis, I continually referenced these dimensions and compared them with one another to ensure my interpretations were congruent with the data. I also triangulated data from multiple cases through collective case study methodology (Stake, 2006) in order to explore the phenomenon of meaning making in online environments across diverse developmental stages, backgrounds, and experiences. Finally, I used three outside consultants intimately familiar with constructive-developmental theory to validate my perspectives on the data and analysis of the polarity maps in particular.

The second means for ensuring quality in this study was through trustworthiness. Lincoln and Guba (1986) propose means of assessing data quality according to four

criteria of trustworthiness in qualitative research: credibility, transferability, dependability, and confirmability. In this study, strategies to ensure data credibility and transferability were consistent with the techniques of a qualitative study. One strategy was prolonged engagement; my design requires a period of recruitment, two separate interviews, and prolonged contact with the participants in order to "identify saliences in the situation" (Lincoln & Guba, 1986, p. 77) over a period of up to six to twelve months from recruitment to data collection to data analysis. A second strategy was member checks. Qualitative inquiry encourages continuous and consistent testing of information by clarifying meanings with participants. In this study, I solicited their reactions to my reconstructions of what they had shared with me in several ways. After the SOIs, I sent each participant a memo offering them my reflections of our conversation and an interpretation of their way of knowing. I also sent each participant a note and different excerpts from my findings, asking for their thoughts on how my interpretations were and were not accurate representations of their experiences. Although I did not receive responses from 100 percent of my participants, the responses I did receive were positive and illuminating, and I incorporated further comments from these member checks to refine and strengthen the findings. For a final member check, I asked Ben to serve in a "participant informant" role (K. Charmaz, personal communication, July 28, 2016) to review all the findings of the study and provide his reactions and insights. Ben was an ideal choice for this role, as his Stage 4 way of knowing suggested that he would have the capacity to relate to the experiences of socialized and self-authored participants, from a developmental perspective. His insights added nuances to the findings that, in turn, strengthened this study. A third strategy for ensuring trustworthiness was thick,

descriptive data, particularly around the context, so that others may apply all or some of the findings in similar settings. In this study, the audit trail of the data collection and analysis strategies provided here could aid in yielding the kind of thick, rich descriptive data that can support transferability of this research to other developmental and online educative contexts.

The third means of ensuring quality is through engaging in sound, ethical practices and protection of human subjects throughout the research (Mocker, 2014). This research protocol was approved by the University of Georgia Institutional Review Board (see Appendix C). The major ethical issues present in an online environment, particularly an e-learning course, include participant consent and confidentiality and anonymity (Kanuka & Anderson, 2007). As a cornerstone of ethical research practice, informed consent is the minimal standard for protecting human subjects. I fully consented each participant by explaining the purpose of the study, the time and effort their participation involves, and the risks and benefits of their participation. I went over the consent form in detail and asked if they have questions before signing the form. Since there were time lapses of days and weeks between the first SOI and the second semi-structured interview, I verbally consented the participants again before beginning the second interview to ensure they understood and were comfortable with their participation in the study. To preserve confidentiality, I assigned pseudonyms for each participant and scrubbed the data after transcription. I kept the transcription and data analysis files on a password-protected home computer and password-protected online file repository. Although the nature of data servers and Internet-based communications cannot guarantee anonymity, I made every effort to protect participant and data confidentiality.

An additional ethical consideration in this research was addressing issues of power and coercion that may have been perceived by recruiting student participants through course instructors (Mockler, 2014). In order to address this issue with students who were currently enrolled in online courses, I requested that those interested in participating in this study contact me directly and not through their instructors. I also did not discuss identities or numbers of students (if any at all) who chose to participate in this study with the instructors who extended my invitation. Additionally, even when students who were currently enrolled in online courses volunteered for this study, our conversations focused on both past and present online courses. In making this clear with both participants and instructors, I aimed to alleviate any possible ethical concerns that would arise from students being asked to participate in a study about their current professors of current courses.

Summary

This chapter presents a qualitative research design grounded in a constructivist epistemology and an interpretivist theoretical framework. I used a collectivist case study methodology and grounded theory methods of data collection and analysis in order to explore adult learning, growth, and development in asynchronous online courses. I collected data through Subject-Object Interviews, semi-structured interviews, and polarity mapping and coded the data using the constant comparative method. Memo writing further illuminated analysis, and six major categories emerged from the data to address the research questions. I ensured quality through measures of internal validity, trustworthiness, and ethical practices throughout the study.

CHAPTER 4

FINDINGS

The purpose of this study was to understand how adults construct meaning, develop, and grow within the context of an online, structured, educative space. The research questions guiding this study were:

1. How does an adult's developmental stage, or way of knowing, shape his or her online learning experience?
2. How do adults at varying developmental stages describe and understand the alone/together paradox in the online learning environment?
3. How, if at all, may an online educative space foster developmental shifts that will help adults meet the unique demands of online learning?

This chapter presents the findings of the study. They are arranged in three sections, corresponding to the three research questions. The first set of findings, corresponding to research question one, is that an adult's developmental stage shapes his or her values for online learning and outcomes, views of the online instructor's role, and experiences of uncertainty in the online learning environment. The second set of findings, corresponding to research question two, is that socialized knowers function within the alone/together paradox and self-authored knowers see the alone/together paradox. The third finding, corresponding to research question three, is that the alone/together paradox is a holding environment for socialized and self-authored knowers by supporting and challenging

their ways of being and knowing. The data are displayed by research question (RQ), findings, and categories in Table 4.1.

Table 4.1

Data Display

RQ	Findings	Categories
1	Socialized and Self-Authored Knowers Hold Different Values for Online Learning and Outcomes	a. Socialized knowers valued instrumental learning and measurable outcomes b. Self-authored knowers valued learning for learning's sake and unknown outcomes
	Socialized and Self-Authored Knowers Hold Different Views of the Online Instructor's Role	a. Socialized knowers understood the online instructor as guru b. Self-authored knowers understood the online instructor as Sherpa
	Socialized Knowers Experience and Mitigate Uncertainty in the Online Learning Environment	a. Experiences of uncertainty b. Mitigating uncertainty through time, text, and peers
2	Socialized Knowers Function within the Alone/Together Paradox	a. Dismissing b. Connecting c. Masking
	Self-authored Knowers See the Alone/Together Paradox	a. Disembodiment b. Navigating paradox through constructing reality, practicing vulnerability, and recognizing limits
3	The Alone/Together Paradox is a Holding Environment for Socialized and Self-authored Knowers	a. Socialized and self-authored knowers described operational, educational, relational, and emotional supports and challenges of the paradox with varying complexity b. Self-authored knowers identified an additional dimension of learning in the paradox: generative

Developmental Influences on Online Learning Experiences

The first set of findings in this study addresses how adults' ways of knowing influenced their online learning experiences. The data revealed that there were indeed differences in how socialized and self-authored knowers related to particular elements in their online courses. First, socialized knowers valued instrumental learning and measurable outcomes in their online courses, while self-authored knowers valued learning for learning's sake and did not ascribe expectations for their learning outcomes. Second, socialized knowers viewed their online instructors in a guru role fulfilling multiple directive functions, while self-authored knowers viewed their online instructors in a Sherpa role lightly holding and guiding them in their learning. Third, socialized knowers experienced uncertainty in particular structures of the online learning environment. These findings are discussed in-depth in the remainder of this chapter.

Different Values for Learning and Outcomes

Participants held different values and expectations for their learning experiences and outcomes in the online learning environment. Socialized knowers held concrete expectations for their learning outcomes and anticipated how the online learning environment would meet their needs. Socialized knowers valued being able to apply their learning directly to their lives. They came to their online courses with clear expectations their learning would improve their skills, careers, and job prospects, and the mechanism of online learning was a means to achieve those goals. Self-authored knowers did not hold expectations for their learning outcomes and had an open mind about how it may impact them.

Instrumental learning. Socialized knowers valued instrumental learning in their online courses. Being able to directly apply the material they were reading and discussing in the course to both their current and future work and lives was integral to their understandings of their online learning experiences. Cherita explained that she measured her learning by how she was able to apply it in her life: "I think the way I know that I've learned something is that I'm applying it. I'm actively applying it to my life…If it's just something that went in and went out then I haven't really learned anything." Leigh expressed a similar perspective on knowing how she learned something in the online course:

> I guess it would be when I was able to apply it my day-to-day life. So you learn these little icebreakers or these techniques for creating a presentation, and you're just waiting for it to be applicable because you—you've done it in class, and they've got examples of how it worked in class and different presentations, but then you're able to do it. And so I guess that's when I—I found out that oh, that actually does make sense and it was useful.

Leigh and Cherita articulated their value to learn skills that directly translate to other contexts. They defined their learning as "applicable" and "useful" when they could replicate products they had seen in class, with relatively little interpretation. Leigh's example of learning icebreakers and presentation techniques shined a light on the type of instrumental learning she wanted from the online class.

Maxim was also interested in ways that he could apply what he was learning in his online course, specifically how he could apply it to his job. He explained one class project in particular that he found useful:

> It basically teaches you how to create a plan, talk to stakeholders about the plan, and convince people to execute a project. So, that was nice because it was a very practical thing. Everybody has projects that they work on, and it's nice to have that sort of practical tie in in the program.

Practicality was another dimension of the instrumental learning that socialized knowers valued in their online learning experience.

In addition to learning from course material, Maxim and Leigh articulated the practical learning they gained from hearing the experiences and perspectives of their classmates. Maxim valued his classmates' perspectives for instrumental reasons:

> Just listening to other people, I think, is also useful. Just listening to my colleagues on the [online] application talking about there are challenges, what they're doing now, where they are, how they're addressing them…I'm able to just know what they know or know what they're thinking, which is helpful.

He appreciated knowing the situations of his classmates and how they are handling them. For Maxim, this knowledge of challenges and solutions gave him a reference point for his own actions. He explained how he could apply what he learned from his online classmates to his work: "You're picking up certain things that someone in the class says when you're at work. I think that's very nice because they could say, 'Hmmm, I took that from the class.'" The influence of his classmates manifested in a practical way for Maxim across contexts. Leigh mentioned the benefits of learning from her online peers in an instrumental way as well. She acknowledged that in the online classroom, she would "get to meet a broader range of people than just the ones that were located in [the institution location]." By being exposed and talking to individuals outside her normal

geographic context, she could gain knowledge that would perhaps be useful to her in her context. She explained:

> I met some really great people [in the online course]. And that just gave me a broader array of experiences to pull from. So what I experienced, someone in [another locale] may have had a similar experience but they handled it differently because they were in a different industry—so different tools from different industries and then different jobs. And so I just wanted that experience of learning from different people instead of just the ones in [the institution location].

Learning how her peers handled similar experiences was the reason Leigh offered for sharing perspectives. She was most interested in how she might be able to apply the same tools, skills, and solutions in her context, and her value for instrumental learning came across in the way she described her reasons for learning from others in the online context.

Measurable outcomes. Socialized knowers came to the online learning environment with expectations for measurable outcomes. For most, this involved career aspirations. They saw their learning experiences and degrees as a mechanism for getting better jobs in the future. Maxim was explicit about why he chose the online learning program he did: "[The institution] is a brand name [that] would help me find jobs." He came into his online program with concrete expectations that his degree would impact his career options. Karen also held concrete expectations for the career outcomes of her learning. Karen was getting her degree to advance her position at her current institution. She said, "I have so much more to offer at my institution and yet without a degree, it doesn't seem like I'm going to get to, so I guess I'm going to have to get a degree." She

felt that not having a degree limited her potential for attaining a position with more responsibility and more opportunity for contribution. Karen saw obtaining an advanced degree as increasing her chances for an advanced position. Cherita had similar instrumental reasons for participating in her online degree program. She explained, "I wanted to continue my education because without continuing my education, I couldn't move up the—I couldn't move forward with my career." She was very clear about what the online degree meant for her future: "I need to get another degree. I need to get the Ph.D. because I need better career opportunities." Maxim, Cherita, and Karen each articulated an instrumental value of learning—that is, if they fulfilled the requirements of the online programs and obtained an advanced degree, their learning would lead to useful, applicable, and practical outcomes.

Online education provided participants with the technical means for attaining their desired outcomes. Many socialized knowers chose to learn online because of the advantages the online learning environment afforded them. For example, Cherita discussed the flexibility learning online gave her as a working mother: "Because I'm tired, and I just got to go to bed. That's why I'm doing online education." Cherita needed to be able to complete her assignments and participate in the asynchronous discussions to fit the demands of her schedule and her life. Maxim also chose an online degree to fit his lifestyle; for Maxim he needed to stay in his job in a different state than the institution from which he was obtaining a degree. He explained, "I didn't want to leave the job and leave the earning potential as well while I was getting it, and so getting it online was kind of a happy medium there." Maxim found a way to get an advanced degree that he believed would lead him to a better job without having to sacrifice time,

lost income, or forward momentum in his career while he went to school. The decision to learn online was logistical for Cherita and Maxim.

Leigh also approached the decision to learn online logistically. Leigh chose online education because of the technical features of the learning environment, and not necessarily because it fit into the demands of the rest of her life. For Leigh, the means was the end, and she had clear expectations of those means. She said, "I guess I just felt like online classes, I'd be able to work at my own pace and set my own little timeline and things like that." She continued, outlining how her learning style was a good match for the online environment:

> I'm very self-disciplined, so I know if I have to do something I'll sit down and do it. I don't necessarily have to have that class time where you have to be there and you know you have to have it done by this date when you go in to class. So I'm very on top of things. So online learning just fit with my personality.

Leigh came into her online experience with values oriented toward instrumental learning and measurable outcomes. Leigh, like other socialized knowers, selected an online learning experience because of these values.

Learning for learning's sake. Self-authored knowers valued learning for learning's sake in their online courses. Both self-authored knowers described simple and abstract ways of understanding their learning online. When asked how he approached learning in his online course, Ben replied, "I kept my eyes open to even the smallest thing that might come my way." He further characterized successful learning in the online program: "If I didn't know something before and I knew it now, that was—that was a win. I don't think it was anything more than that." He did not mention how he planned

to put that knowledge to use; rather, he considered learning something new "a win." He clarified that his learning in the online course gave him means for articulating his knowing. He talked about it as "really just sort of putting structure around what I already knew intuitively or just figured out on my own." Ben's online learning experience was an opportunity for him to discover something new, even if that was just words and concepts to explain what he already intuitively knew. In this way, Ben simply valued the moments when he could learn something new, no matter how big or small, in the online environment.

Sara's online learning experience was self-reflective. Rather than describing her learning as instrumental, as was the case with socialized knowers, she described her learning in more transformational terms. She explained that in her online course:

> I've been able to kind of reframe [past] experiences and be like, "Oh, because that happened, look at what happened after. Look at how much it made me grow." It's like a few light bulbs just kind of going off and being able to have a different perspective about my experiences.

Sara valued learning about herself and how she might view her experiences differently in light of the content and discussions in the online course. This was not a skill or tool that could be taught in order to apply or translate in another context; Sara's learning was personal and abstract. She shared, "I think I've had some 'aha' moments and maybe beyond that I don't know how I would measure my learning." Sara's focus for her learning, like Ben, was on the learning itself more than its applicability. She and Ben both valued learning for its own sake.

Unknown outcomes. Self-authored knowers did not hold concrete expectations for their online learning experiences. In fact, they held no expectations for the online environment or their learning in it. Ben articulated his frame of mind as he entered into his online learning experience: "I didn't really have any expectations for this. I—I mean, I—I figured I'd learn some interesting things and—I don't know." Ben's speech indicated an uncertainty about what or how he may learn in the online environment. He did not know what he would encounter or how the experience would turn out. Ben elaborated: "I was just trying to keep my mind open to whatever would happen." Sara echoed his sentiment:

> I just kind of came in with an open mind. I also, just knowing myself, I was a little—I didn't come in with a lot of expectations. I didn't know how engaged I would feel, but I just told myself, "just be open and see what happens."

Both Ben and Sara expressed an openness to the online learning experience and a spirit of experimentation.

While they may have been abstract about the outcome, they valued the learning that could come from a new experience. In this way, the ambiguity of the online learning environment provided the conditions for them to express this value. Ben articulated an outcome of his open mindedness toward his online learning experience: "I don't know if I had expectations as much as curiosity…it sounded like an interesting format to learn in. And I was, I guess, intrigued to find out just how authentic the experience was compared to, say, a traditional experience." Reflecting back on his experience, he continued: "I feel like it was quite authentic. Because I knew—I was able to regulate or assess my own learning." Because the online environment allowed Ben to direct and measure his

learning according to his own standards, he was able to learn in a way that met his needs. He could both learn for learning's sake and not hold the expectation for this outcome because of the online learning environment.

Different Views of the Online Instructor's Role

Participants at different developmental levels also had different views of their online instructors' role. All participants, regardless of their way of knowing, valued instructor presence in their online courses, but what they valued their instructors *for* varied. The metaphors of guru and Sherpa appropriately reflect socialized knowers' and self-authored knowers' understandings, respectively, of the role of online instructor.

Instructor as guru. The term "guru" means teacher; literally translated from Sanskrit, it means "dispeller of ignorance." However, in Indian culture, guru holds greater and more nuanced contextual meanings than the English connotation. A guru, in addition to imparting knowledge, holds multiple roles, such as "counselor, a sort of parent of mind and soul, who helps mold values and experiential knowledge as much as specific knowledge, an exemplar in life, and inspirational source who reveals the meaning of life" (Mlecko, 1982, pg. 34). It is in the spirit of holding multiple, all-knowing roles that socialized knowers spoke about their online instructors. They viewed and expected their online instructors to be almost wholly responsible for the learning they experienced in the online environment. Dimensions of this responsibility included engagement and personal connection, instruction in a particular way, assessment and feedback, and a general sense of being taken care of. The online instructor was expected to tend to participants' learning well beyond the course content. Socialized knowers

viewed online instructors as going beyond the role of teacher and enacting the role of guru.

Engagement and personal connection. Some socialized knowers described positive experiences with their online instructors when they were readily available and engaged in the course. Lindsey appreciated her instructor's close attention via online communication methods: "You could tell she's always around. She responds to everyone's inquiries within twenty-four hours, usually the same day." Maxim also described how he was often in communication with his instructor, sending "emails back and forth and just talking about different ideas and so on and so forth." Availability was a key component of socialized knowers' perceptions of their instructors' engagement. Another component to engagement was keeping the lines of communication open between the instructor and students. Lindsey gave an example of an instance where she and a fellow classmate were going back and forth in a discussion forum. She emailed the online instructor for support and recalled her response: "I actually agree with you and I see that. Feel free to continue to email me. Do you want to email her? Do you want to poke at that?" Reflecting on that experience, Lindsey said, "She's just a great sounding board." The instructor offered continuing support to Lindsey and attended to the interpersonal dynamics on the discussion board.

Just as the online instructor's presence supported learning for socialized knowers, the instructor's absence could also hinder it. Leigh shared:

> So if the professor is not going to be engaged, I'll post something, but I'm not really concerned about if it means something to someone else. And so…it's very

> easy to just sit at your computer and say, "This is the assignment I have to do. Let me just write something and post it."

Without the instructor's engagement, Leigh felt unmotivated to communicate her ideas in a way that would resonate with others. She remained alone in her learning—not even engaging her classmates—unless she knew the instructor would be reading and responding to her posts. For Leigh, the online instructor held a role for facilitating engagement with the whole class.

Feeling engaged in the course was also a result of feeling personally connected to the instructor. Leigh explained, "I think it's very possible to feel isolated and alone, and I think it depends a great deal on the professor that you have that's instructing the course." Later, in reflecting on a particular online course, she said, "I like how she made it personal. So she got to know us and we got to know her and it felt more cohesive and connected." Creating a personal connection with the instructor created a more engaged learning experience for this socialized knower. Leigh offered a specific example of an instructional technique the professor used that created a personal connection:

> If she gave you feedback on a paper that you submitted, she actually recorded her feedback and sent it to you. And so that was different because I think if you read something, you can misconstrue it or take it the wrong way, but if you hear their tone of voice, that's different and you understand what they're trying to say. And so I really liked that. She did that with every assignment that we submitted. She gave feedback verbally. And so I think that was different because I've never had another professor do that online. And that just made it seem more like we were actually in person, I guess, because I got to know her more.

Leigh articulated the value she gained from her instructor's voice-recorded feedback. More than the content of the feedback, she focused on the technique as a means to create a personal connection with her instructor. For Leigh, the voice recordings were an opportunity to get to know her instructor, and as discussed earlier, this was important for Leigh to feel engaged in the class. Creating means for personal individual connections, as well as facilitating engagement with the class, was a key role that socialized knowers looked to their instructors to fill.

Instruction in a particular way. Another role socialized knowers expected their online instructors to fill was to be teachers in the particular way that met their individual needs. In other words, some socialized knowers held expectations that their online instructors should perform, support, or direct in certain ways so that, individually, they could learn most effectively. Karen offered an example of an instructor whose teaching style she found particularly challenging. In this instance, Karen felt that instructions, materials, and assignments were difficult to find online and the structure of the course was confusing. She approached the instructor about her frustration at the lack of organization in the online course:

> I was using the word "cognitive load" with her. Like the time it takes me to figure out what's where and what your expectations are and what we're supposed to do—I don't have that time. Those are brain cells that are being expended for nothing…So she just thought that that was all part of the learning process, that I just needed to go and figure it out. And to me, that was a little bit of—so I struggled between okay, so is that just an excuse for not wanting to spend your time to get this course organized the way it should be, or are you pushing me to

> just figure it out on my own and that's a good thing? Is this a copout or is this a lesson-learning situation for me that you're creating for me? (Laughing) So I felt like it was a copout. I felt like she—if she really wanted me to focus on my learning and not on my—trying to figure out what the heck, then she would have stepped up and fixed it.

Karen had strong opinions about the way the course should be organized so that she could find things easily and, in her words, not expend brain cells unnecessarily. She acknowledged that there might be learning potential in figuring out the course on her own, but she ultimately dismissed the idea that the instructor created conditions for self-directed learning. She expected the instructor to organize and teach the course in a way that made sense to her.

Lindsey also expected a certain type of instruction in her online course. When she did not receive adequate teaching support from her instructor, she lamented about getting outside help:

> A bunch of us started meeting offline, which defeats the purpose of an online [course]. But if you have to start meeting offline and in person and hire a tutor for your group…then there is a problem. There is no learning that's happening [in the online course].

Lindsey's assumption that all learning should happen inside the course furthers the perspective that online instructors should teach in a way that best meets a student's learning needs. Some socialized knowers preferred to be met by their online instructors rather than seek out the resources on their own that would facilitate their learning. They wanted the information they needed to know delivered in such a way that made sense to

them. They were looking to their online instructors to teach in a particular way in order to meet their needs.

Assessment and feedback. In addition to particular instruction, some socialized knowers learned best with clear assessment and robust feedback from their online instructors. As for assessment, grades were especially important for socialized knowers; for some, it was how they measured their learning. For example, Maxim shared, "When I get a good grade, I think that holds out to say, 'Okay, I did learn from this, and it looks like the professor agrees with the ideas.' So, that's good." Having his professor confirm his ideas and judge him favorably on those gave Maxim the sense he had learned something in the online course. Karen was also interested in her instructor's assessment and getting a good grade. She wanted the instructor to provide clear guidelines for completing an assignment successfully. She wondered, "What do I have to do to satisfy [the instructor] to get a passing grade?" She elaborated on her needs for concrete assessment:

> When that is not black and white, then it can lead to stress. So I don't know if I'm doing this right or maybe I'm wasting my time. Maybe she's not going to pass me. And even sometimes when I would ask for direction, I would say, "Well, how far do you want me to go, how far to take this?" And the answer would come back, "Well, what do you think? Do what feels right to you." And I'd be like, "Oh, you're kidding me." Because I'm kind of an over-achiever. I'll just keep going.

Karen needed her instructor to provide highly structured assessment in order to feel like she was "doing this right" or learning what she should be learning. She looked to the instructor as the judge for her own learning.

Instructor feedback also helped socialized knowers measure their learning. They viewed feedback as another way instructors judged their performance. Leigh described an instance when she did not receive instructor feedback and the impact on her learning:

> The article critiques are not helpful because I don't really learn anything from them. I'm reading an article, and I'm critiquing it, but I don't know if I'm critiquing it the correct way or if there's something specific I should be looking at for this article. And it's difficult to do that online when you're not engaged with the professor, and the professor is not engaged with you, and you never receive feedback on that.

Like Karen and Maxim, Leigh relied on her instructor to know if she was learning something in the online course. She held an assumption that there was a correct way to critique the article and without the instructor's feedback, she wasn't learning through the activity. She wanted the instructor to take up the role of judging her learning, rather than judging it for herself. Karen felt a similar way when asked how she knew she learned something in the online course. She replied, "Well, certainly the feedback from faculty on my work—pushing me with questions and affirming me, for sure. And I looked forward to that. It was like, I agonized over this paper…did I get it?" Feedback from her instructor was crucial for Karen to bolster her confidence in what she learned. As a socialized knower, she needed the affirmation of the instructor in order to know that she had grasped the material. Both assessment and feedback provided the means for online

instructors to fulfill the role of judge for socialized knowers. This role was a critical dimension of how participants viewed their online instructors.

General sense of being taken care of. Lastly, socialized knowers conveyed a general sense that the instructor took care of them in the online learning environment. While some participants' instructors took up this responsibility more fully than others, socialized knowers articulated a preference that instructors fulfill a role as caretaker for their students. Karen expressed disappointment when her instructor did not take care of her the way she expected. She shared, "I mean, she didn't say as much, but she basically just didn't help me or any of the students." Lindsey, on the other hand, felt one of her online instructors took care of her very well. According to Lindsey, "You feel psychologically safe in her class." When asked to describe what she meant, she talked about the general support she felt from her teacher's instruction. She offered a specific example:

> Well, the assignment for last week. I was like, "Oh my gosh, here's another assignment" because it was posted right after we finished something. And then it said, "Your assignment for this week is have a great spring break!" and I was like, "What?!" and she said, "Please enjoy your week off. It would be wonderful to hear that you guys went to the river, to the brook, to the spring, to the ocean or something and listened to water. Look at nature. Try to reflect and interact with what you would normally not do as a graduate student," and that was her prompt for spring break. We didn't have to upload anything, it was just saying, "Go have a good break and just relax," and I felt this sigh of relief…I remember feeling very supported by her, as if she knew what I was going through.

Lindsey articulated the value she held for her instructor as a care taker. She felt the sense that even though she couldn't see her and didn't know the particulars of her life, her instructor still "knew what she was going through." In that moment, she viewed her instructor as not just taking care of her as a student, but also taking care of her as a person. The instructor's role went beyond the classroom and learning and into personhood and wellbeing.

The caretaker role, in addition to the many others that online instructors held, led socialized knowers to view their instructors as a guru. They saw and expected online instructors to perform multiple functions: engagement and attentiveness, personal connection, instruction in a particular way, assessment and feedback, and caretaking. In performing these multiple functions and holding multiple roles, socialized knowers looked to their instructors to meet their individual needs. They sought an all-knowing guru to teach them in the online environment.

Instructor as Sherpa. Self-authored knowers described their views and expectations of their online instructors differently than socialized knowers did. Self-authored knowers talked about their instructors providing facilitation and encouragement in the online environment, but not overt direction, instruction, or assessment. Similar to how Sherpas guide Mount Everest hikers along a path up the mountain, self-authored knowers viewed their instructors as lighting a path so that they may take their own learning journeys in the online environment. The Sherpa people are natives of Nepal who are intimately familiar with the Himalayas. Because of their expertise, they serve as guides and porters for foreign visitors attempting climbs in the area (Senthilingam, 2015). They offer helpful advice about environmental conditions, and they literally do the heavy

lifting to help carry gear up the mountain. A Sherpa is an experienced partner that helps non-natives achieve their goals; self-authored knowers viewed their online instructors in much the same way.

Ben and Sara described their online instructors as encouraging. Ben reflected on the quality of one specific encounter with his online instructor:

> I had some direct interactions with her, mostly when I would turn in assignments, and she was very—she would give me a lot of praise on my things and said I really need to think about submitting these to these journals…and all this stuff. So I thought that was really great. She was very encouraging.

Sara reflected on how the instructor and another student, in tandem, encouraged and supported her learning: "The professor and one student in particular—they're both always right in there, commenting and giving encouragement, things like that. So I guess the learning community itself, in particular those two individuals—that's been really supportive." Both self-authored knowers acknowledged the instructor's role in seeing their learning, their efforts, and their progress, and then encouraging those. Encouragement was the form of feedback self-authored knowers valued. Ben and Sara experienced the instructor as an encourager and supporter in their learning.

Self-authored knowers also reflected on their instructors' guidance in the online learning environment. Ben shared that his online instructor lit a pathway so that he may discover his own learning. He described one online activity:

> She had very specific things for us to go find. It was like a little scavenger hunt. So we had—I don't know, it was like twenty monumental thinkers in adult education, and we picked ten of them or something like that, and everyone wrote

> up a little ditty about the ten they had picked. And so those were very tangible things that made it easy to assess my learning.

Ben appreciated the guidance the instructor gave him but also the freedom to choose how he learned and measured his learning. The instructor's guidance lent a sense of authenticity to Ben's learning experience. He explained, "I feel like it had an authenticity about it because there were things that were—I don't want to say right or wrong...they were things that we were led to discover." The instructor's role as discovery guide was critical for supporting Ben's capacity for self-directed learning.

Ben also described how the instructor guided the class without being overly directive in the online discussion forum:

> There were a couple of times when she would chime in on some discussion that we were having, and I found that helpful because she at least—it seemed like if the conversation were drifting or kind of getting away from the content, maybe—whatever it was, she would sort of do a little course correction for us.

The "little course correction" was just enough guidance for Ben to feel supported by the instructor in the online environment. In a follow-up member check exchange, Ben also said he appreciated the few moments when the instructor would mention what she had learned from others in the class. This created a more mutual learning environment that supported Ben as a self-authored knower.

Sara understood the instructor's role as a Sherpa guide in the online environment, but she also recognized and felt challenged by the responsibilities she held as a result. Sara's online instructor did not assign her students grades at the end of the course; students assessed their own learning and graded themselves. Sara characterized her

instructor's actions as providing "even less structure" in the course than already inherently existed in the online environment. She reflected on the implications this self-assessment had on her online learning experience: "Because I can set my own grade, I don't feel—it's probably affecting me in a way that I don't feel driven to be present and be participating more." She elaborated, "Without having someone give you a grade, there's just like a couple of different aspects that have me kind of like, 'Oh, okay, then it doesn't matter as much.'" Less structure from the instructor created conditions for Sara to self-reflect on her disengagement. She shared, "It's sad knowing—seeing your own motivation. I feel like a horrible student right now, but I think I'm really driven by, like, okay, this is what I need to do to graduate." Sara realized her own priorities in this particular course, and despite her disengagement, Sara was still learning. Although she was not learning with her online classmates or was not as engaged in the online material as she would like, the freedom that her online instructor gave her in setting her own grade and following her own prioritized catalyzed another different type of learning—self-reflective learning.

The instructor's presence in the online environment was important to self-authored knowers. While they spoke about their instructors' guidance as encouraging, they also spoke about presence of the instructor as critical, particularly for close engagement in the online course, as evinced by Sara's experience and similar to socialized knowers' experiences. Knowing their instructors werre engaged in the course themselves influenced self-authored students' learning experiences. Sara fondly described her instructor's personality and presence: "I do enjoy her, and I think she's really smart and knows the material." When asked how quickly she typically responded

to students' online posts, Sara replied, "like a few hours." Ben offered a counter example and his reaction: "I guess the only times that I would say I felt alone is when the instructor was not seemingly engaged." He elaborated, "The feeling of alone really just happens when the instructor is not there and—and so I view that—it's kind of like the star that I would use to sail by is really not there." Ben needed the instructor to be present so he could have a general destination to "sail" toward. He did not necessarily need specific directions, but having an instructor acting as Sherpa was important for supporting his learning.

Experiencing and Mitigating Uncertainty in Online Learning Environments

Socialized knowers struggled with aspects of the online learning environment. They described contending with uncertain conditions and confusing structures in their online courses and sought ways to navigate and mitigate this uncertainty and confusion. Socialized knowers mitigated their felt uncertainty in three outwardly-focused ways: they used asynchronicity and time to their advantage, they capitalized on the text-based communication in online courses, and they sought out peers for additional support. Using structures within the technical environment, but outside of the self, helped socialized knowers navigate the uncertainty they experienced online.

Experiences of uncertainty. Socialized knowers described feeling challenged by the nature of the online environment. More specifically, they described the uncertainty they felt at the structure of their online courses and how that made them uncomfortable or confused. These experiences of uncertainty arose when they were not sure how to navigate the mechanisms of the course. For example, when Karen started her online program, she found the ambiguity of learning online challenging. She shared, "I found in

the beginning, I didn't do well with not-structure." The "not-structure" of her online courses included learning course material on her own, as well as finding the requirements for completing assignments in the online course. Karen explained a shift in mindset she experienced later in her online learning experience that helped her handle the former: "So I can only say for myself that I eventually gained confidence in that I don't have to know everything about everything." Rather than feel like she was responsible for knowing "everything about everything," she grew comfortable in her own way with the self-directed structures of the online course. Her course demanded self-directed learning in not only seeking information about the subject matter, but also in seeking information about the course itself. She explained the latter:

> I was in a situation with a very, very, very bright faculty member but who was not comfortable with [the online platform] Moodle and who evidently asked to have a previous instance of the course copied. And so there were things in it that didn't make sense.

Karen struggled with finding correct and logical structures within the technical environment that matched the instructor's learning objectives. This led to Karen feeling frustrated at not knowing what she should be doing and challenged by this ambiguity created in the online course.

In addition to the learning structures of the online course, some socialized knowers experienced challenge by the communication structures of the course. Lindsey described the uncertainty she felt when posting in the online discussion forum:

> The online forum is quite sensitive. You have to be aware. It's just like sending texts and people getting upset at each other. There are so many layers of tone or lack of tone that exist, you have to be really aware.

She articulated how by nature of the text communication online, misunderstandings and conflict could occur. The potential for ambiguity generated by the virtual communications was a challenge that Lindsey experienced and had awareness of in the online environment.

Karen described a slightly different challenge with regards to the structures for communicating online. Karen was not concerned with the potential for conflict with others, but rather how they may respond to her ideas and postings in the online forum. She described being eager for feedback via the discussion postings: "I got to the point where I was checking Moodle all the time to see if anybody else had posted because I was so curious what their take on whatever it was, was." Because of the time lag between posting her ideas and her classmates reading and responding to them, the communication structure of the online forum created ambiguous conditions. She expressed frustration at the uncertainty and not knowing she experienced in posting on the online discussion forum. For Karen, the uncertainty came from the asynchronicity of the communications: "There were times when yes, I wish I could get a quick answer, when I post something and no one responds, and I'll go back and check and people haven't replied to me. That is a little frustrating." The uncertainty she felt by virtue of the communication structures in her online course was a challenge of the environment.

Mitigating uncertainty. While socialized knowers experienced moments of challenge in the learning and communication structures of their online courses, they also

found support in the structures of their online courses—namely, in the communication structures. Some participants used these structures to mitigate their own feelings of uncertainty in the online course. Additionally, socialized knowers used their peers to navigate their own and their collective uncertainty.

Time. As discussed earlier, Karen found the lag time between her posts in the online discussion forum and her classmates' responses occasionally frustrating. The space in time generated a level of uncertainty while she was waiting for responses. On the other hand, Leigh appreciated the time the asynchronous communication structure provided her, and she experienced it as supportive. She compared communicating via online methods to communicating in the face-to-face classroom:

> It was different…because I had more time to sit and reflect on what it—what I wanted to say instead of, you're sitting across the table from me, waiting for me to say something, and I feel pressure because it's timed.

Leigh framed the time to respond to her classmates as an opportunity for thoughtful reflection. She did not see the challenge that taking time to respond may generate for her classmates, just as Karen did not see the support that having time to respond may generate. Leigh focused on the positive aspects that time brought her in posting in the online discussion forum. She elaborated, "I like having time to kind of think through things." In this regard, the communication structure of the online environment worked well for Leigh. She said, "It just gives me time to kind of compose myself and get—get ready for what's coming." It is in this last expression that Leigh acknowledged that she used time to mitigate the uncertainty of "what's coming" in the online environment.

Leigh almost had to brace herself for the ideas and responses she may read in the online discussion forum; she met this uncertainty through the support of time.

Text. Leigh and Karen found support through the text-based communications of the online discussion forum. Whereas Lindsey warned about the potential for misunderstanding one's intended meaning in text communications, Karen and Leigh used the online communications structures to mitigate that uncertainty. Specifically, they focused on having a record of what was discussed in the class by virtue of the text-based communication structure of the online course. Karen explained how she would go back to read and reflect on the online discussions:

> I just like that the material is there, and I can go back to it, and I can read it again. If you're in a classroom and you have a conversation, it's like, "What did she say again?" and I don't remember how that was. Maybe at my age I just like being able to reread something that someone wrote and think about it again.

Leigh, almost two decades younger than Karen, still expressed a similar sentiment: "I like the online portions more because you have that record of what everyone has said so you can go back and look at that." Karen and Leigh both used the online communication structure to remind them of what was said and to support them as they reflected on their classmates' thoughts. They reduced the uncertainty of text-based communication by framing it as a record of meaning. As long as evidence of what was "said" in the online class existed, they could be certain they would not miss something or forget. The text communications supported Karen and Leigh in their uncertain online learning experiences.

Peers. Some socialized knowers attempted to mitigate moments of uncertainty in the online learning environment by engaging their peers. In the absence of organized course schedules and directions, structured assignments, or high teacher presence, socialized knowers used their classmates for support. Leigh described how she and her online classmates sought each other out when they encountered uncertainty in the course:

> Our group and some of the others in the class had had so many problems already trying to figure out what we were supposed to be doing that we went ahead, and, I think it was the second week of class, we started meeting weekly just to discuss the assignments and where things were located in [the online learning platform] and how to find things.

They created an additional online peer community to mitigate the logistical challenges of finding information in the course as well as discerning unclear assignments. Their weekly meetings were held over Skype. Leigh explained why the real-time video and audio communication capabilities of Skype were also supportive: "We had that face-to-face communication. Even though it was over technology, it was still face-to-face. And so that helped because we were able to talk through the assignments." She articulated the tone of the conversation in her group's weekly Skype sessions:

> "Well, I've started this part and I don't understand it. Has anybody else started it? Where are you? What do you think she means by this? Have you heard anything back about our assignment coming up?" So that was very helpful.

Leigh found that this level of peer support helped minimize the uncertainty generated by the structures of the online course. She and her classmates felt confused by assignments and could not find information easily in the online platform. Together they created the

support they needed—outside the online learning environment—to hold each other through the challenging structures they experienced.

Lindsey recounted a similar experience in her online course. She described a moment when she and her classmates felt they did not receive adequate explanation from the instructor:

> If you asked, "Hey, I have a question about this theory on page 5," [the instructor] would just say, "This was covered in slide 55. Please go back to the presentation or text booklet on page 29," and you're like, "Are you kidding? We did that already, we don't know how to do that!" And so students sort of started answering each other's questions.

Students in the online course began to support one another organically, filling the perceived gap in the support they received from the instructor. Karen also described how her classmates sought peer support in the face of uncertainty. In Karen's experience, she was often the one other classmates called upon when they were confused. She recalled, "I got calls from fellow students…who were really struggling with not understanding what they were supposed to be doing." Each of these socialized knowers—Leigh, Lindsey, and Karen—found support in sharing their confusion and navigating the unclear instructions and assignments with their classmates. In order to mitigate the uncertainty some participants experienced in the online learning environment, they created their own logistical support through peer interactions.

Section Summary

The participants in this study experienced online learning differently according to certain patterns in the data. Socialized knowers understood the purposes of their

learning, the role of their instructor, and the uncertainty of the online environment in specific ways. They valued learning for instrumental reasons and measurable outcomes, namely the applicability of the skills they acquired and the ability to translate those directly to professional contexts. They also understood their online instructors in a guru role, offering multiple and varied supports for personal connection, specific instruction, feedback, and caregiving. They felt uncertainty in the online environment and compensated for it through external structures of time, text, and peer support. The experiences of self-authored knowers fell along similar patterns, with the exception of the third finding. The data did not support a finding about self-authored knowers experiences of uncertainty in their online courses. The data revealed that self-authored knowers valued their learning experiences for the opportunities to gain knowledge without particular or known outcomes and viewed their online instructors in more of a Sherpa role to facilitate rather than direct their learning.

Relating to and within the Alone/Together Paradox

There are these two young fish swimming along and they happen to meet an older fish swimming the other way, who nods at them and says "Morning, boys. How's the water?" And the two young fish swim on for a bit, and then eventually one of them looks over at the other and goes "What the hell is water?"

– David Foster Wallace, commencement speech to Kenyon College class of 2005

A distinction exists between how socialized knowers and self-authored knowers related to and within the alone/together paradox. This finding addresses the second research question: How do adults at varying developmental stages describe and understand the alone/together paradox in the online learning environment? Socialized

knowers did not have a full awareness of the alone/together paradox, but they functioned within the context. Similar to how fish understand water, socialized knowers were swimming in the paradox. They were subject to the state of being alone and being together. They acted along a spectrum of socialization, tending toward aloneness through "dismissing," tending toward togetherness through "connecting," or just beginning to engage the paradox unconsciously through "masking." In contrast, self-authored knowers had an awareness of the paradox and understood their experience of simultaneously being alone and together as "disembodiment." They navigated the liminal state of alone and together by consciously constructing reality, practicing vulnerability, and recognizing limits. These findings are discussed in this section.

Socialized Knowers: Functioning in the Paradox

Liminality, from the Latin word "limen," literally means "threshold." For socialized knowers, the alone/together paradox was a liminal space where they existed on the threshold of being alone in their learning, separated from their classmates by a technical divide, and of being together sharing thoughts and experiences in a virtual community. They were subject to this liminal space, not recognizing it as such, yet they had agency and functioned within it in common ways.

Socialized knowers enacted their subjectivity of the alone/together paradox along a spectrum of socialization, organized into three gradations or tendencies: dismissing (tending toward aloneness), connecting (tending toward togetherness), and masking (a strategy for being simultaneously alone and together). Dismissing is the act of not acknowledging the aloneness of one's experience in the paradox; connecting is the act of relating together to meet the operational demands of learning; and masking is the act of

using the online environment to both protect and reveal the self, a means of engaging the liminality of being alone and together. Dismissing and connecting were enacted by fully socialized knowers and those in transition to self-authorship. For these participants, dismissing and connecting were ways of functioning within online courses that reduced the complexity of the environment. Dismissing was a way to clearly be alone; connecting was a way to clearly be together. Masking was found in the experiences of the socialized knowers that were beginning to transition to self-authorship (Stage 3(4)) and was an enactment of their rising awareness of the alone/together paradox. While dismissing and connecting were more black and white ways of seeing the paradox, masking was the recognition of more complexity and shades of grey in relating in the online environment. The relationship among the three enactments in the alone/together paradox is represented by the Figure 4.1.

Figure 4.1

How Socialized Knowers Function within the Alone/Together Paradox

Dismissing. One way that socialized knowers described their feelings in the online learning environment was to reject the notion that the aloneness of the environment affected them, their emotions, or their learning. Participants acknowledged that isolation and loneliness were possible in online courses, but they did not

acknowledge that it was a part of their experience or reality. For socialized knowers, engaging the alone side of the alone/together paradox was not a conscious act; in fact, they actively dismissed it. Dismissing is the act of not seriously considering or acknowledging the aloneness of one's experience in the alone/together paradox.

One example came from Lindsey, when asked if she ever felt lonely in her online class:

> No, I think for my personality, if I feel isolation and loneliness I might be projecting usually or it definitely mirrors where I am in my personal life or…it's something that I'm creating on my own for myself...I don't feel that. I know that my friends have talked about it and a lot of my friends have talked about feeling very vulnerable and naked on the online forum, but I just think, "Don't feel too much about it. Post your gut reaction and that's it."

Lindsey acknowledged that she may feel isolated or lonely for a moment, but she quickly rationalized it as "projecting" and self-created. She ignored her own potential feelings of isolation and loneliness and offered advice to her friends to do the same. Her encouragement not to feel "too much" of the loneliness reveals that is somewhat aware of the feeling but worked to dismiss it. Her advice to post and move on suggests a "grin and bear it" mentality to feeling vulnerable and an active avoidance of the aloneness of the online environment.

Maxim and Cherita described ways they avoided, perhaps unconsciously, the aloneness of the online environment. In both cases, their responsibilities outside the online classroom provided a means for distraction from any potential loneliness inside the online classroom. Maxim stated, "I don't feel it…we're all busy anyway." He used his

own busyness—and any busyness of his classmates as well—to dismiss feeling the alone side of the paradox. Maxim avoided it by simply not feeling it. Cherita acknowledged the potential for feeling lonely, but the busyness of her schoolwork and forward trajectory in her degree program helped keep her focus elsewhere. She explained, "I think it could have felt lonely if I wasn't so motivated to get through the next step and get it done." She continued: "I could see where it would be lonely. But it was more like I don't have time to get caught up in my emotions. I got to get it done." Cherita didn't allow herself to slow down to acknowledge or feel the alone dynamic of the online environment. Like Maxim, she used her busy life, which included the postings, assignments, and deliverables of the online class, as a means of distracting herself from the environment in which she was learning and functioning and its potential effect on her emotions.

Cherita also clarified that the busyness of her life precluded her need for being together with her online classmates. In her words, "I'm just going to get it done and I don't feel the need for the interaction because I don't have time for the interaction. I got my kid, I got my job, and I got school. I don't need interaction." Cherita asserted that because she didn't have the time for interaction, she didn't need the interaction. She did not consider what she might be missing by not being and interacting with her peers and instructors. Inherent in Cherita's perspective was her assumption that she did not need to be with others to learn in the online environment; she felt capable to "get it done" on her own. Karen articulated a similar view of learning and interacting in an online course: "The majority of learning is independent. The majority of the learning is deep reading, deep reflection, application. So I don't need to be in the same room with people for that." For Karen, being together in the online environment wasn't even necessary for her

learning. Karen did not acknowledge the aloneness of the online environment because it was not an influence in her success as an online student. She dismissed the potential for loneliness before it could even be a factor.

These four socialized knowers described functioning in the online environment in terms of busyness, self-reliance, and avoiding any potential feelings for isolation and loneliness. They did not recognize the aloneness of the online environment, and rather than engage it, they actively dismissed it.

Connecting. All socialized knowers described feeling a certain degree of connectedness with their online classmates or instructors that allowed them to learn together in a collegial manner. These connections often began by getting to know one another and on some occasions moved to sharing more personal details about each other's lives. However, among socialized knowers, these connections only went so far in the online classroom and were thwarted by technical and emotional barriers to vulnerability. They became close enough to connect in order meet the operational demands of their learning, but they do not experience emotional closeness with their online classmates.

***Getting connected*.** Participants described their experiences of getting to know their online classmates and the instructor as a process of getting connected. These connections happen through formal and informal online mechanisms. The most common medium to interact with classmates, cited by all participants during their interviews, was the discussion forum. Lindsey described her response to a typical first week's assignment in an online class to post a personal introduction to the discussion forum:

> I can get very excited. I'm one of those people that posts first. I post an introduction always. I respond to everybody. "Hey, I also have a music background! Would love to connect." I'm a master socializer even on social media. I will look at everyone's post, do all of that.

Karen echoed Lindsey's enthusiasm at connecting via the discussion boards. "The opportunity to read what other people have written. I mean, that was so exciting for me."

In addition to the discussion boards, Maxim cited using social media as means of interacting with his classmates to initiate and maintain informal relations. In fact, these electronic interactions were enough to keep him feeling connected to his online classmates: "So, I don't feel isolated per se and they have Facebook chats, they have What's App chat, a whole host of other online stuff that keep you kind of connected…Those are unofficial, of course." The social media applications that kept Maxim connected technically also kept him from feeling isolated emotionally. He hoped these applications would foster connections that led to relationships in the future. He explained, "I think it helps build a relationship because then you know, 'Okay, this guy likes this, he doesn't like this, he's a funny guy, he's an interesting person, blah, blah.'" The means of connections through discussion boards, extracurricular text messaging, and social media applications served the function for socialized knowers to get to know and begin to feel connected to their online classmates.

Getting close. Four socialized knowers described getting to know online classmates in a way that brought them closer to each other. For Karen, reflective memos shared publicly in the class were an opportunity to learn more about the personal lives of her classmates. The examples she offered—stories of families, jobs, creative outlets—

came out in assignments that had the effect of learning about one another beyond understandings of course material. She described their levels of disclosure as "appropriate," and in sharing about each other's personal lives, came to know her classmates on a more intimate level. In her words, "you got to know some kind of intimate details about people's lives…so it brought you pretty close." Cherita shared a similar experience of learning about the personal lives of some of her online cohort members, although not as part of a formal class. Cherita's online learning experience included membership in a group of colleagues who shared a major professor. They communicated via an email list on a weekly basis, checking in with each other and offering support. Cherita described the kind of sharing that encouraged closeness among her cohort:

> We're talking every week, and you hear about stuff other than school. I just had a baby or, there's one woman, she has border collies. I don't know how many dogs this woman has. She has at least five of them.

The informal sharing on a regular basis created a "sense of community" for Cherita that she did not report finding in her formal online classes.

Maxim framed his online interactions as creating the conditions for deeper connectedness during later face-to-face learning experiences with the same classmates. In his online course, Maxim was part of a smaller cohort for group assignments and discussions. He speculated that the connections he formed in the online class with this smaller cohort might make for richer conversation in later face-to-face classes: "I think when I go back…for the next set of [face-to-face] classes, there might be stronger connections between me and these guys than some person who is not in my [online]

group." By virtue of the time spent in a smaller group, Maxim experienced a sense of connectedness. He explained what it was about the online learning experience that led to the stronger connections:

> I would probably say that the online interactions help almost more than the face…[trails off]. Okay, when I physically go in front of somebody, it's obviously easier to make a connection, I believe, personally than online. But the thing is…there are so many people in the [face-to-face] class that you don't have time to make the deeper connections. But then while you work on a working on an [online] program with these people, week in and week out, the time makes it that the connections are stronger.

Time with a smaller group of colleagues allowed Maxim the opportunity and space to build connections with them.

Leigh described a phenomenon she experienced in face-to-face courses when she learned about her classmates' lives through conversations that were not related to course material. Similar to Maxim's view, in her estimation, "I think I get more out of the classroom-based courses just because you have that face-to-face interaction and you can have those deeper conversations that go totally off-track." Although rare, Leigh did have occasion to have "deeper conversations" in the online environment. She described the content that went beyond course topics or scripted discussion prompts and how it bred closeness between herself and her classmates:

> We had really good conversations where we started with the topic but then they went off on a side branch and we had really good conversations about different programs or different things that were important to people or people had questions

> about this is the situation I'm in. I've never been in it. Does anybody have any input? So I think while we didn't meet in person, I never saw them face-to-face or virtually through Skype or anything, I still felt like I knew them through those conversations.

Getting to know her classmates through side conversations helped Leigh feel connected and less isolated. For Leigh, it was important that she knew that others could understand her fully in the examples and situations she posted about on the discussion boards. In her experience, without that understanding, her classmates could not offer sound advice or expertise. She explained, "That part could be difficult for people if they're sharing this in an online environment and they feel like well, they don't really know the situation so how are they going to be able to help me." In fact, without that level of understanding, it could have been a barrier to connection for Leigh. She postulated, "I think that's how the isolation happens is, I've got this to deal with. These are my responsibilities. Nobody else understands, and I don't feel like I can connect with them." Having the time and space to share information, backstories, and a fuller picture of her situation were necessary conditions for Leigh to be able to connect with her classmates in a way she felt more fully understood. Not only was this space enough for her to feel connected, but it was also enough to stave off potential feelings of isolation.

Just close enough to connect. Socialized knowers described feeling connected with their classmates and instructors, but the degree of this connection varied among them. What they had in common was an acknowledgement that the connection existed, but it had its own distinct quality in the online environment. Each participant understood and experienced this quality differently.

For instance, even when Cherita did not reply to her cohort's email messages each week, she still felt a connection to them: "I don't always respond because – I mean, part of me is very social. The other part of me is very not social. It's weird. But I always read the messages and I feel very connected to everybody." Cherita devised her own method for maintaining connection with her major professor's online group; she did not always feel compelled to contribute to the email discussions or share what was going on with herself, but she participated in a way that felt accommodating to both the social and non-social parts of herself. Further, her participation met her communication needs, and she participated just to the level she needed in order to feel connected.

The quality of this online connection was unique for Cherita. She made a distinction between how she interacted with her major professor's online group and her online classmates. Regarding her online classmates, learning with them did not necessarily mean knowing and caring about them:

> In my courses, I would interact on the discussions but there wasn't really a lot of community. It was like I'm writing you. I'm going to write this in-depth post. I'm going to respond to your post and ask you questions, but I really don't know you or care.

Cherita's words depict an emotionally distant connection with her online classmates. When she posted on discussion boards, she did so in a technical manner, writing and responding to them without getting close enough to care about them. She maintained a degree of connection to facilitate the technical demands of communicating, interacting, and learning with her classmates, but she did not go beyond that threshold to really "know" them in the online classroom.

Despite claiming not to care about them, Cherita's interest her online classmates' personal backstories and hobbies cultivated her connectedness to them on the discussion boards. She described her affinity for responding to certain people based on their similar interests:

> I recognized people and there were certain people I liked to respond to better than other people. Because [of] our conversation, we had related interests. So if [we] had related interests, there were certain people I would seek out. "Where is so and so? Let me respond to them, more than other people."

Cherita felt more connected to some of her online classmates than others based on her knowledge of their backgrounds and shared common interests. This connection with some of her online classmates influenced with whom she chose to communicate and learn. However, her relationships did not transcend the technology of the online classroom to influence her feelings of really "knowing" her classmates.

Leigh described a quality of closeness that allowed her to connect with her online classmates. She made the distinction between the kind of connection she experienced in face-to-face classes and the connection she felt with those online. Regarding her online classmates:

> We are friends. We're just not as close as maybe people in the same class would be. So I'm not sitting at this table with you once a week for 16 weeks…and so there's not the same connection as I can touch you and say you're pretty, but I still know you're background. You're not married. You have a stepson. So there's still that connection. So I know Tim likes to work out. Michelle has become a vegetarian. Lily has two children and she's a marathon runner. So I

> still know things about them. We know things about each other but we're not besties.

Leigh made a point about the quality of connection by knowing *things* about her online classmates, but not knowing them in a way they would be "besties," a colloquial term for best or very close friends. This was similar to what Cherita conveyed in saying she didn't "know or care" about her online classmates; she and Leigh do not know them in a way that leads to the sort of emotional attachment you would have to a best friend. However, Leigh thought of them as friends. For her, a qualified friendship, close enough to know about each other but "not besties" depicted the connection in the online class.

For Lindsey, the connection to her online classmates did not suffice as friendship. She sought to build connections by knowing more about them, but learning about their backgrounds and interests was not enough for her to consider them friends.

> I feel like I wanted to connect with maybe five people because I saw their intro…and I responded to a bunch of people who sounded very similar or fascinating or different than I was and not many corresponded because they just posted that week and then they went into week two. So, I thought, "Oh, we could've been friends." I do believe that had I met a lot of these classmates, at least five or six that I'm thinking about, in the classroom we would've definitely gone out for a drink already or had coffee or would've skipped our groups, just chatted in the hallway. But online, in this class, no one.

The degree of connection Lindsey experienced in her online class had a different quality than that which she would have experienced in a face-to-face class. For Lindsey, she could have imagined forging friendships in the physical space, similar to Leigh. Unlike

Leigh, however, for Lindsey the online space prevented her from being friends with her classmates. Yet the quality of the relating described by Lindsey, similar to other socialized knowers Cherita and Leigh, was close enough to feel connected in the online learning environment.

Masking. Masking describes a phenomenon that some socialized knowers enacted in the alone/together paradox of the online learning environment. Through masking, participants used the online environment to both hide and reveal the self in order to manage the liminality of being alone and together. This emotional barrier or "mask" protected socialized knowers from a certain degree of vulnerability while they worked through the ambiguity of the online space. Although the degree of vulnerability varied between the two participants who described masking, they both articulated it as an emotional distancing strategy for being with their classmates and instructors and simultaneously managing their selves. Masking is a more complex way of understanding the alone/together paradox and only occurred among socialized knowers in transition into self-authorship (i.e. Cherita and Leigh who both scored at Stage 3(4)).

Using the environment to hide and protect. Some socialized knowers described masking as a means of protection in the online context. Cherita characterized her behavior and interactions as "guarded" in her online courses. She described her classmates as "strangers," and this made her skeptical to share details about her life with them. She elaborated, "I'm not sharing where I live. These are strangers. This could be dangerous. So face-to-face, I'm pretty open and give people everything, whereas online, I'm more guarded." Simply interacting with others online wasn't enough for Cherita to

feel safe enough to be vulnerable; she put an emotional guard up against her classmates and responded in fear to the uncertainty and created by the online context.

Leigh was also guarded in her interactions with her online classmates. However, while Cherita felt the anonymity of her online classmates could be dangerous, Leigh focused on the comfort that her own anonymity in the online class afforded her. Leigh described the environment as "a wall almost between myself and everyone else before I get comfortable with them. So it gives me that time to reflect on what the course is and what interactions I'm going to have to have with people." Leigh took advantage of the "wall" of the online environment to protect herself against the felt uncertainty of being with others. With a barrier between herself and her classmates and instructors, she had the time she felt she needed to reflect on the dynamics of the course.

Using the environment to reveal. Leigh described feeling more comfortable in general online because she was not together physically in front of the instructor and her classmates. She explained she was able to be "more open and vulnerable online because it is just a name sometimes and not a face, and that makes it easier." Being "a name and not a face" made Leigh feel more comfortable revealing herself and opening up online than in a face-to-face environment for several reasons. First, it reduced her social anxiety:

> So being in an online class instead of walking in to a sea full of faces that I don't recognize at all and causing anxiety, I'm able to look at names and no one's sitting there looking at me trying to find a seat.

Being able to observe her classmates without feeling watched helped Leigh feel more relaxed in the learning environment. Second, the physical barrier allowed her to focus on

learning instead of being preoccupied with possible judgment from classmates and the instructor:

> I think the online courses made me more open to learning, just because I'm not concerned about, "Well, did I wear this to class last week? Is anybody going to remember me? I don't want to sound stupid in front of the professor."

The online environment afforded Leigh a degree of physical anonymity that allowed her to be more present and open intellectually. The asynchronous nature of the course also allowed her to not be put on the spot by the instructor, giving her time to answer in text and relax even further in the course. Third, communicating via text instead of face-to-face emboldened her to relate her thoughts without fear of social repercussions:

> I'm not always comfortable saying things out loud to a group. I'll be thinking them but I might not want to say it because I don't know how the conversation will go or what reaction I might get. But online, I have no problem typing it and sending it out there.

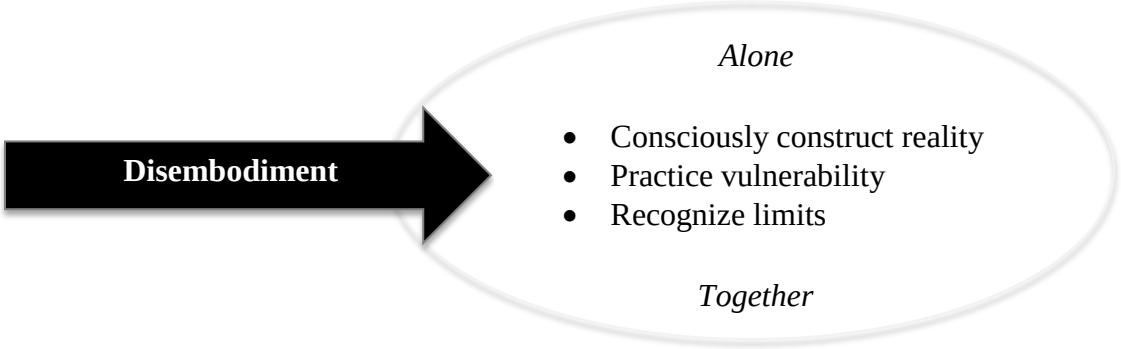
The physical barrier of the online learning environment allowed Leigh to reveal herself in a way that was more comfortable for her than face-to-face. The anonymity of the environment provided her with a degree of emotional distance to feel protected from the judgment of others, and in turn, be more vulnerable with her classmates. In this way, she enacted masking to both hide and reveal herself as a way to be both alone and together in the online context.

Self-Authored Knowers: Seeing the Paradox

Self-authored knowers described being alone and together in online environments in ways that indicated they were aware of the liminal space of the alone/together paradox.

They indicated this awareness by naming and describing "disembodiment," an effect of the context on their relationships and learning with their instructors and classmates. They recognized the limits of virtual connectedness from both an individual and collective perspective, and their nuanced descriptions and understanding of the quality of their interactions indicated they saw the paradox with increased complexity. Further evidence that self-authored knowers had an awareness of the paradox is that they began to strategically navigate it. They navigated disembodiment through consciously constructing meaning, practicing vulnerability, and recognizing limits. Self-authored knowers' understanding of the alone/together paradox is depicted in Figure 4.2. The way self-authored knowers articulated awareness and enacted their understanding of being in the alone/together paradox of online learning is the focus of this section.

Figure 4.2.



How Self-authored Knowers See and Navigate the Alone/Together Paradox

Disembodiment. Self-authored knowers' understanding of the alone/together paradox involved recognizing the complexity of being simultaneously alone and together in the context in which they were learning and connecting. They described their experience of the paradox as "disembodiment." Disembodiment is the cognitive state of being alone and together without physical, face-to-face presence. Self-authored knowers

had a conscious awareness of this state and articulated its effects on their learning experience. They described the challenges of building relationships and making connections for deep learning in the online context, particularly through text alone and without visual cues. They emphasized the disadvantages that not being physically together brought to individual interactions as well as to collective learning, while recognizing that they remained somewhat connected by way of experiencing these challenges together. Disembodiment describes an experience of simultaneous connection and disconnection.

Both self-authored knowers acknowledged that something was lost in only connecting and communicating in the online environment. As Ben described it, "the online experience feels a bit disembodied from your class and from your instructor." The physical distance manifested as a disconnection for Ben; he lost a sense of physical connection with his online classmates and instructor. Sara addressed the physical challenges she experienced to individual relationship building in the online class:

> I just really—I think I'm kind of a "people person" and I like building those relationships and in person and all the nonverbal cues and things like that. I just feel like I know a little more of what's going on [in the face-to-face class], and I feel—I feel a little bit lost on the online course.

Feeling "a little bit lost" was Sara's reaction to the ambiguity of being together in the online environment. She realized why she felt lost—that is, she was trying to figure out the interpersonal connections and dynamics of the class without being able to see physical, nonverbal cues from her classmates.

The lack of nonverbal cues and other information normally gleaned from in-person interactions left participants feeling like they didn't know their classmates well enough to feel connected in the online class. Ben articulated the limiting nature of connecting through the online environment without physical sight or sound as "this phenomenon of being simply words on a screen." He elaborated: "I couldn't talk to somebody…or connect with them via Skype or something and get a sense of body language and really understand how they're feeling about this or that. So that's—that's the disconnectedness." For Ben, connecting with his classmates meant more than knowing about their hobbies, their families, or their backgrounds; he needed more information than could be constructed from text communications in order to feel close to them. Being "simply words on a screen" meant that Ben experienced being together with his classmates in a disconnected way in the online environment.

Text-based representations of real people led Sara to feeling a sense of disconnectedness in her online course as well. When asked to describe her connections with her online classmates, Sara responded, "I'd say it's pretty weak." And like Ben, Sara described her online classmates as word on a screen. For Sara, "they're just names." She explained:

> I could tell you something about most of the people in my [face-to-face] instructor-led courses. I can look at them and it'll trigger, I'm like, "Oh, yeah, she's from here, she works there, her background is in this." I'd be able to remember something, but [in the online course] it's just kind of blank. They're just names. They don't feel like real people.

Relating to her classmates via text communication made a difference in how she thought of them. She didn't view her online classmates as "real people." Knowing things like occupations and backgrounds may have been enough to feel a connection with her face-to-face classmates for Sara, but reading that information in the online environment was not. Intangible qualities expressed through face-to-face interactions were necessary in order for Sara to feel connected.

Ben discussed the difference he felt when he was able to see and hear his online classmates through video and audio features in the course. He recalled the moment when his online classmates became more than just "words on the screen":

> So it—this really came to—into relief for me when in this class, I think it was probably about three-quarters of the way through, we had an Adobe Connect session with the rest of the class…and being able to actually see my colleagues in this forum or in this venue…I suddenly felt this connection that I hadn't previously. Prior to that, it was just all words on the screen and trying to imagine what these people are like. But then when, when I actually saw them, that brought into relief what the thing about online education that's kind of missing.

Seeing his online classmates gave Ben a different sense of connectedness than he previously had before the Adobe Connect session. Adobe Connect is a web conferencing tool that allows users to communicate via their computers' cameras and microphones in real time. Instead of physically sitting together in a face-to-face classroom, students can sit behind their computers but be seen together in an online classroom. This capability of seeing his classmates' faces and hearing his classmates' voices made Ben realize a degree of connectedness had been missing in the text-based discussions in his online class thus

far. He articulated why the intangible qualities of face-to-face interactions made for a different connection than in the online context:

> I guess it felt connected to them in a different way. I guess I would liken it to when you do a phone interview. You can't see body language. You get an incomplete picture of who your colleagues are. But I felt like with the Adobe connect thing, all these names that I had seen and people that I had imagined behind those words were either confirmed or adjusted or completely wrong. It's not unlike this situation where you hear your DJ on the radio forever and then you see them and you're like, "Oh." So I mean, I was delighted to see all of my colleagues, so that was good. But it is that same experience. I'm like, "Oh my gosh, these are people."

The quality of the visual connection in particular led Ben to feeling differently about his classmates. Feeling connected to them "in a different way" led him to a moment of realization that they were more than his initial interactions had allowed him to see or the text-based environment allowed him to experience.

Prior to connecting to his classmates via web conference, Ben described his experience as "operating in a vacuum." He felt disembodied from his classmates in the sense that he was alone without the context normally provided by visual and audial signals. This sense of learning in a vacuum dissipated after the Adobe Connect session, even though he was still connecting via the discussion forum. He elaborated:

> I think [the Adobe Connect session] made for richer discussion in subsequent classes because I knew a little bit more about Anna who might be posting about this or that, or another colleague. So I—I just felt like when I saw their words on

> the screen, they were suddenly more layered. It's very one-dimensional when you are just existing in a discussion forum.

The flat dimensionality of the online forum contributed to Ben's sense of disembodiment. It was in seeing the faces and hearing the voices of his colleagues that alleviated some of that disconnection. In Ben's words, "having this quasi face-to-face thing kind of helped color or fill in the picture a bit."

Disconnected but not alone. Self-authored knowers also recognized the collective implications for feeling disembodied. Group cohesion, progress, and potential were concerns for Sara and Ben. Sara offered a visual for how she envisioned the challenges of connecting as a virtual class:

> I guess in the physical classroom, I feel like—I envision a bubble around us, like there is a boundary, like we're a class. In this online learning class, when I…picture us in our—in my mind, I don't see a big bubble enveloping us. I see us all in our own little bubble, and maybe there's a dotted line between all of us or maybe the more—a stronger line between certain individuals, but yeah, it's—it's just hard to feel like we're a class, like we're a group.

Ben articulated the challenges of not being physically present with instructors and classmates as both individual, for learners, and collective, for the class as a whole:

> When you go through a class in a traditional setting, I feel like you make connections with people and that together, you have this forward motion through the class. But when you're in the online experience, that—a—a lot of that is missing.

The collective implications of disembodiment resonated with both self-authored knowers. They saw that in the alone/together paradox, one of the drawbacks to technical connectedness, and a product of disconnectedness, may be a lack of group cohesion and progress.

Ben recognized that others in the class may also feel disoriented by the disembodiment. In this group disorientation, Ben felt a sense of togetherness. He explained, "As a group, we're trying to find our way. And so in that respect, I felt not alone at all, but also not connected to the class." The lack of group cohesion gave Ben common ground to relate to his classmates. In the collective disconnectedness, he was alone, together with his classmates. He reflected, "…When your classmates reach out to you and express a similar thing, it sort of confirms in your mind that we're all just sort of a collection of people but maybe not the sum of our constituent parts." Later he echoed similar sentiments: "I'm trying to make the online experience as much like the traditional experience in that we're a group of people that together are greater than the sum of our parts, and we have forward motion through this class." Ben's description of the disembodiment he felt in the alone/together paradox suggests that the online class lacks a generative quality and sense of progress that occurs more naturally in face-to-face settings. Ben characterized this generativity as "forward motion" and "greater than the sum of our parts." Self-authored knowers saw the collective implications of disembodiment and viewed it as thwarting generativity and group cohesion.

While self-authored knowers understood the alone/together paradox as disembodiment, they also recognized that their classmates were in the paradox as well. They were alone together, experiencing similar challenges to learning and relationship

building by virtue that they were all connecting through the online environment. Ben succinctly described his experience being alone together: "I felt disconnected but not alone. So there's—there's a real difference there." The difference in being disconnected and alone and being disconnected but not alone is an important one in the recognition and understanding of the alone/together paradox. As discussed in the previous finding, most socialized knowers enacted behaviors that tended toward either being alone or being together as a way of reducing the complexity and functioning within the paradox. Ben's description of feeling "disconnected but not alone" reflected a movement toward being simultaneously alone and together. The self-authored perspective was a more nuanced and complex way of understanding and being in the alone/together paradox.

Deliberate strategies to navigate disembodiment. Part of the way self-authored knowers experienced the alone/together paradox was to enact deliberate strategies to navigate disembodiment. Sara and Ben recognized the context and then sought to navigate the challenges of that context in three distinct ways—consciously constructing reality, practicing vulnerability, and recognizing limits. They enacted these strategies in service of their own learning and experience in their online courses.

***Consciously constructing reality*.** Having to discern meaning from participants' words alone without physical and verbal cues was a challenge for self-authored knowers to being together in the online class. For Ben and Sara, being in the online classroom was a conscious exercise in constructing their own reality. They described having little information and data from which they could go on in the online environment. Ben articulated his awareness of the context: "When you're in the online world you have so little to construct meaning from so everything thing is up in the air, all over the place."

He explained that the ambiguous context meant he would have to make his own meaning within it: "You have to create your own reality—and we do that all the time. In 'physical' class you have a lot of data to go on. In the online world it's pretty scant." The lack of data one has to draw meaning from in face-to-face classes versus online classes was apparent to Sara as well. Sara recognized the implication of this lack of data in connecting with her instructor: "Oh, it's tough to envision what she's really like, but I do—I like the vibe, as much as I can tell." Sara relied on a felt sense of her instructor, "the vibe," to try to create a reality for herself of what her instructor must be like in person.

Not having much data to go on, and being responsible for creating one's reality, impacted how participants attempted being together with their classmates. Ben described trying to construct meaning from text alone: "I was trying to read a lot of meaning into who these people are simply from their words, and so I—I didn't have a great deal of connection with them." Ben recognized that communicating in the online environment did not build relationships the same way it did in the face-to-face classroom. This led to Ben feeling like he could not connect with his online classmates, despite his best attempts to create meaning from his text-based communications with them.

Sara used the strategy of deliberating creating her own reality to mitigate a potentially distressing situation. Sara expressed concern her fellow classmates could be judging her, but she talked herself out of it.

> I don't think they can chat kind of behind my back…I don't think they could kind of get together and say, "Oh, Sara's post was crazy." We're kind of all like in

> little silos. I mean, I guess they could send individual messages to each other, but I don't think—I don't—I guess in my mind I don't think they are.

Sara's choice to believe in her mind that her classmates wouldn't go behind her back and gossip about her is a strategy for mitigating the discomfort she felt by the disconnectedness.

Practicing vulnerability. A second strategy that self-authored knowers used to navigate feeling disconnected in the alone/together paradox was to practice vulnerability. Both self-authored knowers described enacting vulnerability in their online courses, and they recognized the potential it held for bringing them closer to their classmates and instructors. They offered vulnerability in themselves and sought to create it in the online classroom in order to ameliorate disembodiment.

Ben described how he practiced vulnerability in his online classes: "And so what I would do as a strategy is offer up a lot of personal stuff about myself. So talked a lot about my interest in stuff." By slowly revealing parts of himself, he was hoping to create a safe environment for others to share. He described the reasoning behind his strategy to initiate vulnerability: "I make a very deliberate attempt to be vulnerable and offer up all sorts of personal things…wacky stuff, just to get people to kind of start talking and start interacting on a more personal level." Ben recognized that deeper personal connections could be crafted, even in the online environment, through vulnerability.

Sara offered a nuanced perspective on the conditions for creating vulnerability and safe spaces to share in the online classroom. Sara's experience, although in a different online class, suggested Ben's strategy to reveal personal details was sound. She recounted some of her classmates sharing about themselves in the online discussion

forum and her reaction: “They’re really involved, and that’s made me feel really, I guess, safe sharing.” She elaborated, “Everyone’s been sharing some pretty personal things, so I feel like it’s a vulnerable space for many. So that makes it feel safe.” Sara’s perspective on the conditions for safe sharing in the online environment speaks to the importance of reciprocal vulnerability. In order for Sara to enact her vulnerability, she wanted it to be reciprocated.

In addition to being reciprocated, she also wanted her vulnerability to be received. She explained, “You hate to throw something personal out into space and just hear crickets. Then I could definitely see myself just closing back up.” She experienced received vulnerability with her online instructor:

> I was kind of telling a vague story about when someone in my family passed away and kind of relating that to it being a transformative experience. And my instructor, she picked a part of that story and related it to her own life, that she kind of did the same thing. And then I responded to her and kind of let her know that that was comforting and let her know exactly who it was in my family that had passed away and—so I feel like that was relationship building there.

Sara recognized vulnerability as a deliberate path toward relationship building. This could help her engage the disembodiment of the alone/together paradox.

Sara also used the disembodiment of the online environment to enable her own vulnerability and cultivate a safe space for sharing. She described how the technical barrier of not physically being with her classmates helped her to be with them emotionally: “And you can write something and be crying or be laughing and no one will

know…you feel a certain level of anonymity." She contrasted this with her emotional experiences in face-to-face classes:

> My instructor-led courses, a lot of them will be my colleagues…and I don't want them to think I'm weak or crying in class. So that's going to dictate the level at which I share because I'm not going to try to share something that's going to make me emotional. So I'd say in that way, I'm definitely able to share more and share faster [in the online environment].

Due to dimensions of the technical environment, Sara could enact vulnerability. Those technical dimensions, and the alone/together paradox, provided the conditions for both disconnectedness and connectedness; the structures that limited expressions of vulnerability for some could provide the conditions for others to offer it.

Ben attempted to generate vulnerability among his classmates in the online environment. He described:

> I tried to pull out—I don't know—personal aspects or professional aspects of things that they were saying. I'd try and just bring to the fore—try—prompt them to—to bring to the fore anything that was personal just so I could get a better sense of who they are.

In Ben's view, inquiring and prompting his classmates to share parts of themselves could generate a level of personal connection that may begin counter the downsides of the alone/together paradox. He explained, "It's in service of trying to ameliorate this disembodiment…I'm trying to make connections with people that this digital barrier is preventing me from doing." Ben, along with Sara feeling the disembodied nature of the

alone/together paradox, attempted to manipulate it by practicing and attempting to generate vulnerability.

Recognizing limits. Self-authored knowers' attempts at practicing vulnerability were sometimes met with resistance. In these instances, self-authored knowers also recognized the limits of the alone/together paradox. When asked what makes it difficult to be vulnerable through the digital divide, Sara replied, "I guess the only thing would be—I don't know if it's a deterrent or if it helps—that…I don't really know them." Harkening back to earlier perspectives she shared on how she could more easily and quickly be vulnerable in the online space, Sara also realized that for others it would not be as easy or quick. The digital divide could actually be a barrier to personal connection, vulnerability, and relationship building—all ways in which self-authored knowers sought to mitigate disembodiment.

Ben offered his experience of resistance to vulnerability:

> They just want to get through this damn class and just finish the program. They don't care about all these connections. (Laughing) And here I am trying to be all social and trying to be encouraging and whatever, and they're like, "Ah, whatever. I took this online program because I didn't want to talk to people." (Laughing)

Although he was saying these words with a bit of humor, the kernel of truth was that Ben realized the different motivations of his classmates and respected their experiences of disembodiment, and therefore the alone/together paradox, was different than his. If they were not interested in personal connections, he recognized the limits of the paradox. He shared, "As a general rule, I've been trying to be eminently vulnerable in personal ways

and unfortunately, I don't feel like people are taking me up on it, in general." Ben recognized vulnerability as a choice in the online environment, and while he chose to engage it, others did not.

Section Summary

Adults at the socialized and self-authored stages of development described and understood the alone/together paradox in qualitatively different ways. Socialized knowers functioned within the paradox but did not see or name it. They enacted their subjectivity to the paradox in the online environment along a spectrum of socialization through dismissing, connecting, and masking. Some participants engaged in dismissing and connecting as they acted out preferences for being alone or being together in the online learning environment. Two socialized knowers just beginning transition to self-authorship engaged in masking, whereby they began to enact unconsciously a way of being alone and together. Self-authored knowers saw and named the alone/together paradox as disembodiment. They sought to navigate the paradox through consciously constructing reality, practicing vulnerability, and recognizing limits of the paradox. Participants in this study understood the liminality of the alone/together paradox with varying degrees of complexity that aligned with their stages of development.

The Alone/Together Paradox as a Holding Environment for Growth and Development

The alone/together paradox acted as a holding environment for growth and development by providing support and challenge for adults learning within it. This finding addresses the third research question: How, if at all, may an online educative space foster developmental shifts that will help adults meet the unique demands of online

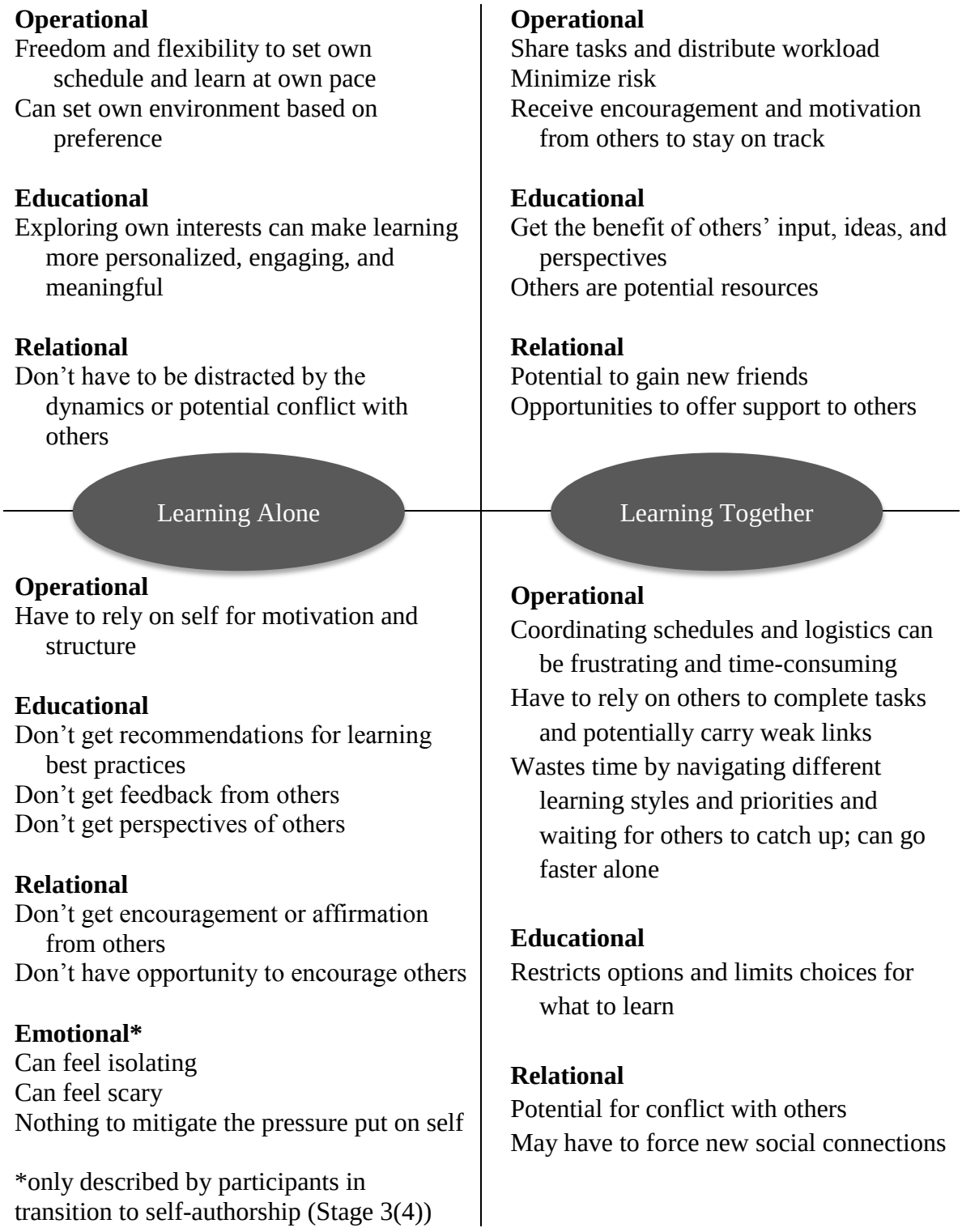
learning? A holding environment, at its most simple, is a context for an individual's psychological and emotional growth and development. Online educative spaces, by virtue of establishing an alone/together paradox, are holding environments for socialized and self-authored knowers. The paradox in and of itself provided support and challenge for participants, thereby creating the conditions for growth and development in the online classroom.

In this study, polarity maps (Johnson, 1992) were used as a tool to bring forth the supports and challenges, or upsides and downsides, participants experienced specifically from learning alone and together. The polarity maps revealed several dimensions of learning alone and together in which participants experienced support and challenge: operational, educational, relational, emotional, and generative. These dimensions created a holding environment for socialized and self-authored knowers.

A Holding Environment for Socialized Knowers

A thematic analysis of socialized knowers' (Stages 3 and 3(4)) polarity maps revealed insights into how participants experienced the alone/together paradox of online learning as a holding environment. A combined socialized knowers' polarity map is represented in Figure 4.3. It outlines their understandings of the upsides and downsides to learning alone and learning together. Synthesizing and analyzing polarity maps revealed that socialized knowers recognized the possible operational, educational, and relational implications—both positive and negative—when learning alone and learning together. Further, socialized knowers beginning transition to self-authorship (Stage 3(4)) recognized an additional negative implication of learning alone—emotional.

Figure 4.3



Socialized Knowers' Polarity Map

Operational dimensions. The operational dimensions listed in the polarity map are practices and structures that support the technical and mechanical functions of learning. Participants often framed the operational implications of learning alone and together as either logistical enablers or barriers (supports and challenges) to learning more efficiently. For example, a positive operational characteristic of learning alone was the freedom and flexibility to schedule learning on one's own time and at one's own pace. Each socialized knower named this in her individual polarity map. Leigh offered the following illustration: "So learning alone, I can set my own pace…if I want to read ahead, I can. If I want to turn assignments in ahead of time, I can." Lindsey also appreciated the flexibility of learning on her own time:

> I can log on, if I'm learning on my own and I'm thinking of an online class and can engage at one, two, three a.m. If I'm learning alone, it's self-paced and I can actually do my real job of being a mom three…and actually learning alone gave me the freedom to be a mom and to multitask all day.

Control over one's schedule, often in order to balance the demands of life outside of school, was a common positive operational characteristic of learning alone. Control over one's environment was also a common positive operational characteristic of learning alone. Leigh articulated how she took advantage of the flexibility in setting her own learning environment: "So if I want to work in my office, I can. If I want to work on the beach, I can do that. I can go outside if I want to. So it's—it's what I prefer." The flexibility in time and place that learning alone offers is a positive quality for socialized knowers.

Only one negative operational result of learning alone was named by socialized knowers—that is, having to rely on themselves for motivation and structure. Cherita articulated, "The biggest problem I found was that it had to be self-motivated and sometimes it's hard to motivate yourself…and without having support from others…I'd have to rely on my self-motivation, which may fail me." Not having the external support that the structure of a group of people provides felt challenging for Cherita. Leigh felt similarly: "There's no motivating outside force to get me to do things. I have to be the one that wants to do it and if I don't feel like I want to do it, I might not do it that day when I need to." The structure of being alone was a logistical barrier to learning, and thus a negative operational result.

The positive operational dimensions of learning together included sharing tasks and receiving external support and motivation. By sharing tasks, participants distributed the workload of completing assignments and minimized the risk of a failed project. Lindsey explained that when learning together, "We can make sure our final product makes sense and that we're sharing the risk because we were like, 'Oh, my God, if we do something wrong on this project…I'd be the one on the line.'" Another positive operational quality of learning together was the encouragement and motivation that came from others. Cherita said, "Having the others around gives me the boost I need when I need it to get back on track." Karen echoed the same sentiment: "When there's a group…[the course] has usually sort of due dates and deadlines and some more structure to it, so I kind of know okay, I've got to have this done by Friday and that done by next Friday…so when you're learning together, you are more likely to finish on time."

Completing assignments with minimized risk was a focus for how learning together could the structure and support the logistics for participants' learning.

Operational negative implications of learning together included coordinating group schedules, slowing down to accommodate others, and carrying weak links. Participants described the frustration of coordinating logistics when they were involved in a group project. Cherita explained her thoughts in detail:

> When you're working on group projects, and you're working online with people who are all over the country or all over the world, and you have a group project due, and you have to be on their schedule. When can we all meet as a group? Who's going to turn in this work? Did they turn the work in on time? That can be frustrating.

The intricacies of coordinating several schedules along with managing deadlines for assignments can be a logistical and mental burden for some. Participants also described the logistical and mental burden of being held back by others in the learning environment. Karen lamented that learning together "slows me down." She continued:

> If I feel like I know the material then I'd like to be able to keep going. And there was one course I took…which was nice to have because it was the easiest course I've taken because I was so familiar with [the subject]. But I feel like I could have just moved on and finished that class way ahead of what I had to march in step.

For Karen, learning together required that she accommodate others' pace, and this held a negative quality for her. If learning alone, she could have gone faster and her learning would have been more efficient. Lindsey also expressed frustration over an operational

aspect of learning together that got in the way of her efficiency. Working with others to complete tasks meant that she would inevitably have to carry a "weak link." She explained:

> It could be me projecting or it could be a process but there is always a weak link. I think there is a weak link in every group…and if you cannot work to work out where you can complement each other it just hurts the group process.

Lindsey recognized that individual learners have individual strengths, but working together to use those in a group process can be challenging. If individuals' strengths are not utilized, then the group process to accomplish the learning goal can be compromised. A "weak link" could impede one's efficiency in learning and thus, is a negative operational implication for learning together.

Educational dimensions. Participants framed the educational dimensions of learning alone and together as either contributions or limits (supports or challenges) to the ways in which they acquired knowledge. When asked about a positive aspect of learning alone, an educational implication mentioned was that exploring one's own interests can make learning more meaningful. Cherita explained, "The thing that stands out the most in learning alone is the highly engaging personalized learning…in that it relates to my individual interests." On the other hand, negative educational implications of learning mentioned were not getting recommendations for learning best practices, feedback from others, or the perspectives of others. Not getting the perspectives of others meant that participants would not get feedback on their work as well as hear opinions that might challenge their own. Karen and Leigh articulated both views. For Karen, she worried that learning alone meant, "I don't get the perspectives of other people on the

things that I'm reading and writing." Leigh clarified that learning alone meant, "it's only my perspective and my thoughts, so I don't have a pool of resources to pull from. It's only what I've experienced and how I think that could apply." While Leigh was more concerned about how her thinking may suffer, Karen was concerned about the quality of her work. Both women recognized negative educational implications of learning alone.

In a somewhat inverse relationship, the negative educational implications of learning alone were articulated as positive implications of learning together. Namely, participants could get the benefit of others' perspectives and use them as potential resources. Cherita thought it was "important to get different perspectives…[because] you can gain so much more from hearing other people." Leigh thought hearing from others was important as well, but for slightly more specific reasons:

> You have that resources pool so you have the different perspectives and opinions…they can explain something differently and that makes complete sense to you, or it doesn't [and] then you have a great discussion. There are different work-life experiences that you're able to learn about and pull from and kind of anticipate down the road to see how things work in.

For Leigh, the utility of others' perspectives was paramount, but both women articulated how being exposed to multiple perspectives was a positive educational quality of learning together. Participants described the negative educational implications of learning together in that it could compromise their individual learning process. Karen thought that learning together "restricts my options." She explained:

> If I happen to be in a group learning situation, then usually there's a plan for the group…and so, in group learning, you don't have the freedom to go where you

want to go. I have to spend my time in a videoconferencing meeting that's not—I'm not getting much out of.

Not having the freedom to go where she wanted in her own learning path as a downside to learning together mirrored the freedom she and others felt over their learning as an upside to learning alone. Freedom of choice in their learning was a trade-off socialized knowers felt that had to make when learning together.

Relational dimensions. Relational dimensions of learning alone and together involved the role of participants' classmates in their learning experiences; for socialized knowers, the relational implications fell into one of two possibilities: conflict or collegiality. While conflict felt challenging, collegiality felt supportive. In many ways, this was two sides of the same coin—how to get along with others in the online learning environment.

In regards to learning alone, a positive relational dimension was no risk of conflict. As Lindsey succinctly put it, in learning alone, "there is no conflict with people. I guess, I'm thinking because I can avoid it." She also identified another relational factor in learning alone that minimized conflict: "There is no need to manage a group process…I just have to manage myself." By not engaging conflict or group dynamics, Lindsey could more easily focus on learning the material and completing the assignments. For Lindsey, the positive relational implications of learning alone were efficiency-related. On the other hand, Karen recognized that collegiality could suffer when learning alone and identified that as a negative relational implication. Not being able to get or provide encouragement to others was a downside to learning alone for Karen. She explained, "I don't get encouragement or that there's no opportunity for

affirmation from others, and the flip side of that, no opportunity for me to cheer other people on as they go on this similar journey." Mutual support was an important relational aspect of learning for Karen, and she identified this as lacking when learning alone.

In a similar fashion, collegiality was seen as a positive relational aspect to learning together. Leigh identified building a support system as one result: "You have the opportunity to build those friendships and relationships and you have a support system while you're learning." Lindsey echoed Leigh in her comments and thought relationship building was a particularly noteworthy attribute of learning together. She went so far as to say, "I think the real part of learning together for me is making new friends, always." Socialized knowers highlighted opportunities for friendship and camaraderie as a positive implication of learning together. Inversely, a negative implication of learning together was potential for conflict with others. Lindsey identified avoiding conflict as a positive of learning alone; likewise, she articulated how conflict could be a negative of learning together:

> I also think dealing with conflicts that will naturally arise and of course, everyone is always polite in the beginning and they're going to try to avoid it but then it has to come to, it has to explode and if it doesn't it will implode, and it will hurt the group process, I think. I've been really having to deal with that, and it's emotionally exhausting especially for me because those are the things that keep me up at night.

The inevitability of conflict as part of a group process appeared to weigh heavily on Lindsey and be a detractor for her to learning together. Socialized knowers did not name any positive qualities or outcomes to conflict when learning together; they only talked

about the downsides. The potential for conflict and the risk that posed to collegiality was a challenge for socialized knowers as they understood the relational implications of learning alone and together.

Emotional dimensions. Emotional dimensions described individuals' feelings about and inward reactions to learning alone and learning together. The emotional dimensions respondents described had a self-reflective quality. Not all socialized knowers named emotional dimensions of learning alone and learning together. In fact, only socialized knowers in transition to self-authorship—Cherita and Leigh, who scored at Stage 3(4)—named emotional implications of their learning, and they only named negative emotional implications of learning alone. Two of these negative emotional implications were feeling isolated and scared. Cherita described both feelings: "If you're isolated, what are you going to do? There's nothing there…you're kind of out there and off the cliff with no net." Cherita's response reflected a fear she felt without having others around for learning support. Feeling isolated was also an experience Leigh described when learning alone. Leigh recognized feeling isolated might not be in her best interests: "You are isolated so you're always by yourself when you learn alone, which as an introvert that's not good for me, and I realize that." Feeling "isolated" and "always by yourself" had an impact on Leigh that could affect her wellbeing.

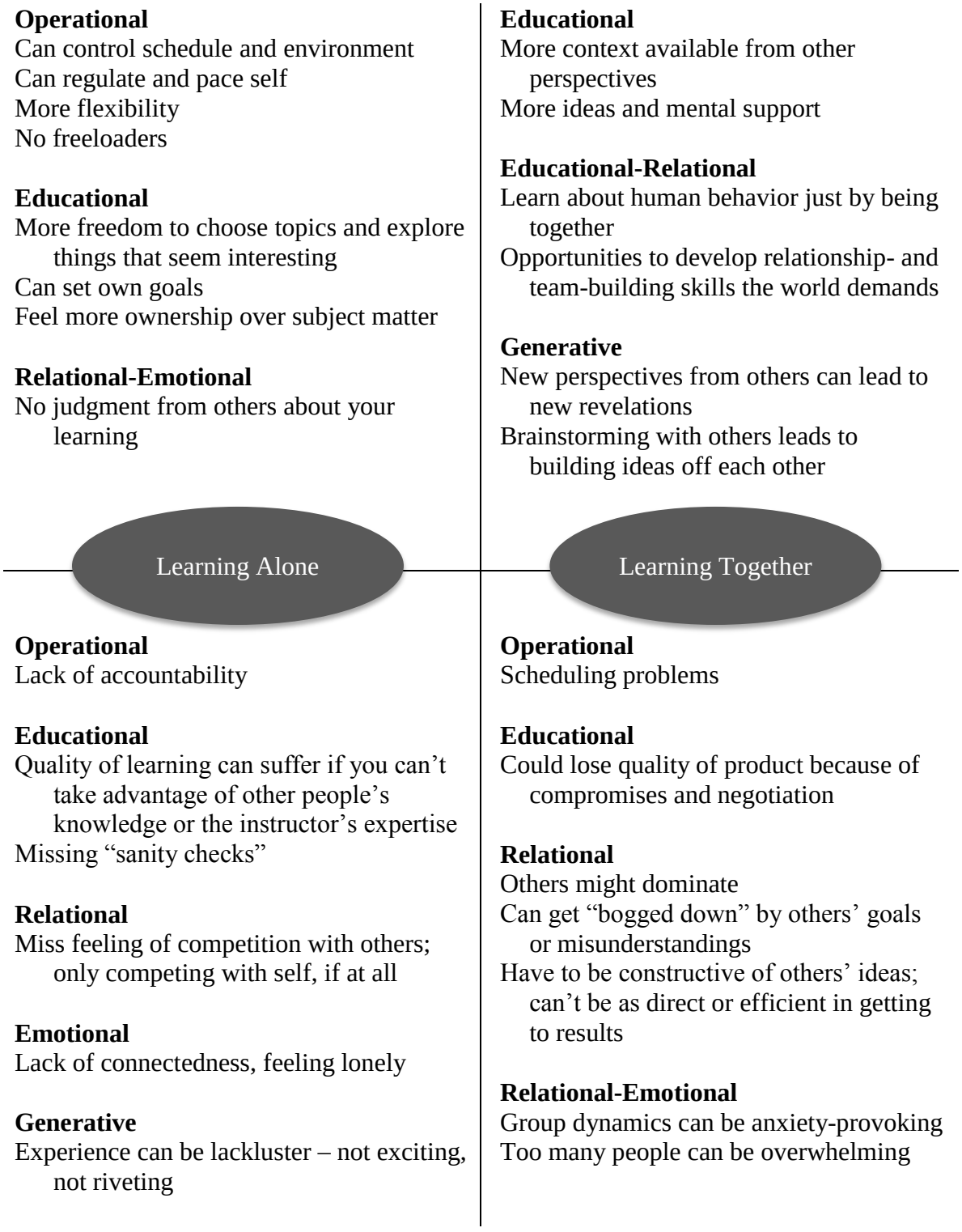
Being alone also had an impact on Cherita's wellbeing. For Cherita, learning alone meant having to be self-motivated, and "when you're feeling self-motivated, you put too much pressure on yourself. If I put too much pressure on myself then I end up shutting myself down." Cherita felt the internal burden that learning on her own created, and without others to mitigate that burden, she would become overwhelmed. In fact,

feeling the aloneness of learning alone could push Cherita beyond her capacities, and she would no longer be able to function effectively. The emotional implications of learning alone were different than the operational, educational, and relational qualities of learning alone and together described by other fully socialized knowers; these implications had an psychological effect that Leigh and Cherita felt at a deeper level.

A Holding Environment for Self-authored Knowers

A thematic analysis of self-authored knowers' (Stages 4/3, 4(3), and 4) polarity maps revealed insights into how participants experienced the alone/together paradox as a holding environment. A combined self-authored knowers' polarity map is represented in Figure 4.4 below. It outlines participants' understandings of the upsides and downsides to learning alone and learning together. Polarity mapping revealed that self-authored knowers recognized more layered and complex dimensions than socialized knowers did when learning alone and learning together. Self-authored knowers named positive and negative aspects of operational, educational, relational, and emotional dimensions, just as socialized knowers did. However, they often named these in combination with one another, understanding them as overlapping and connected rather than separate. Additionally, self-authored knowers articulated a generative dimension to learning together that was also absent when learning alone. The remainder of this section discusses the supports and challenges of learning alone and together for self-authored knowers.

Figure 4.4



Self-authored Knowers' Polarity Map

Operational dimensions. The operational dimensions for self-authored knowers included those listed by socialized knowers and were framed in much the same way as logistical enablers and barriers to learning more efficiently. Scheduling, flexibility, self-regulation, and freeloaders or weak links were themes for both groups. Sara echoed the socialized knowers' perspective that learning alone required self-motivation and structure; she framed the challenge as suffering a lack of accountability. She deeply felt the operational challenges of learning alone:

> Feeling undisciplined, kind of lack of accountability. Then I failed, I failed to be disciplined and really give this my all, and in part because—it kind of makes me feel like a child, like, "Wow, I can't even be a real adult and take my online class seriously."

Sara's perspective demonstrated how the operational challenges of learning alone, namely self-directed learning, could create conditions for self-reflection and provide a holding environment for self-authored knowers.

Educational dimensions. The educational dimensions described how participants viewed the supports and challenges of learning alone and learning together with regards to how they acquired knowledge, as they did in the socialized knowers' polarity map. Supportive aspects of learning alone included setting one's own learning goals and directing those pursuits. Ben appreciated the opportunity to "be freer to explore, in general" and "explore things that might seem interesting." Self-directing their learning was a supportive structure for some self-authored knowers.

Maxim cited a positive of learning alone as having "more ownership of your subject matter." He explained:

> I think you get more out of it because you are taking on the knowledge yourself. You did not need help from the outside. You did it yourself. So, I think that shows that you'll take on [learning] yourself…it's your creation as opposed to multiple people creating it.

Feeling the achievement of learning on one's own, without anyone's help, was a positive for an early self-authored knower. Maxim appreciated the opportunity to know he could master knowledge and skills on his own in a learning environment.

On the other hand, Sara offered that when learning alone, the quality of learning could suffer. Without others involved in her learning, she worried she might not get a good educational experience. In learning alone, Sara explained, "you can't take advantage of other people's knowledge. If there's an instructor, you're able to get some expertise. You're not being taught by yourself." Ben also pointed out that without others involved in his learning, he could go off track, and the quality of his learning could suffer. A challenge when learning alone, he said, was that "you're missing sanity checks…that's a computer term. But they're to know that you're at least in the general region of where you want to be." Being able to check in with others, whether classmates or an instructor, was a supportive structure when learning together that was absent for Ben when learning alone.

Positive educational implications of learning together involved similar sentiments about shared perspectives and access to more ideas that socialized knowers described. Self-authored knowers also described educational implications in terms of overlapping relational and generative dimensions as well, which are discussed in later subsections.

Self-authored respondents did not indicate any negative educational implications of learning together.

Relational dimensions. Self-authored knowers articulated relational implications of learning alone and learning together mostly in terms of their downsides; they understood the positive relational implications of learning alone and together as integrated with educational and emotional dimensions, which are discussed in later subsections. Ben identified a relational downside of learning alone as "missing a feeling of competition." When learning alone, he continued, "you're competing against yourself, if you're competing at all." A challenge for Ben when learning alone was no external competitive relationships.

Each self-authored knower identified relational challenges to learning together. Sara shared that when learning together, "the others might kind of dominate, and so if you're an introvert, for example, you might not feel comfortable sharing ideas. You just stay quiet." Ben worried that when learning together, "you can get bogged down by others' goals or others' misunderstanding or things they want to pursue." As a self-authored knower, Ben felt challenged when others' goals or pursuits encroached upon his or could slow him down. Maxim felt the challenge of offering feedback when learning together. In his view, couching critical feedback took time that made learning together inefficient. He explained:

> One thing when you're learning together, you've got to be constructive. Obviously, you can just shoot down somebody else's ideas but not that I want to shoot down someone else's ideas, but there is a way to say it and a way to present it and not offend somebody. Whereas if you're thinking it through yourself, you

> can just tell yourself, "Hey, that's a stupid idea"…more critical and more direct—I think that wastes less time.

Tending to the relational aspects when learning together felt challenging to Maxim.

Self-authored knowers understood positive relational implications of learning alone and together as integrated with educational and emotional dimensions. These layered dimensions as supports are discussed in the remaining subsections.

Educational-relational dimensions. Educational-relational dimensions of learning alone and together involved layering the implications of relating to one's classmates in such a way that it also impacted one's acquisition of knowledge. Sara articulated educational-relational supports for learning together:

> You learn kind of like not only the material but you kind of learn—just learn about human behavior in general, by virtue of being together. It gives opportunities for relationship building and also valuable teambuilding skills that the world is kind of demanding more and more.

Sara described how being in relationship with her classmates could also positively affect her learning. For Sara, learning together fostered transferable skills to other contexts where she would interact and relate to other people. She also viewed learning with other people as valuable practice for her capacities to act in the world.

Emotional dimensions. Similar to socialized knowers, self-authored knowers articulated the emotional downsides of learning alone. Specifically, these challenges were a "lack of connectedness" and "feeling lonely." Sara clarified what she meant:

> Feeling lonely in your learning. I mean, I like to—I come home and tell my husband about the things that I've learned. I guess—and then maybe he'll want to hear them. It's just—it's exciting to learn with people, I think.

Contrasted with the socialized knowers' perspective, Sara did not describe the aloneness as "scary" or "isolating;" rather, she lamented that learning without others could be dull. Less seemed to be at stake over the emotional downside of learning alone for Sara as a self-authored knower.

Relational-emotional dimensions. Relational-emotional dimensions of learning alone and together involved layering the implications of relating to one's classmates in such a way that it also impacted one's internal state of being. Self-authored knowers named supportive relational-emotional elements of learning alone and challenging relational-emotional elements of learning together. The positive relational-emotional dimension to learning alone was that individuals would feel no judgment from others about their style or pace for learning. Sara described, "You're kind of learning at your own pace in a private way. No one can judge how quickly you're grasping the material or—no one can judge you at all, I guess." Learning alone, in private, shielded Sara from potential feelings of inadequacy or doubt that could arise when learning in relationship with others.

Sara also named two relational-emotional challenges of learning together. These centered around group dynamics. First, she described the anxiety she experienced in groups:

> I think just naturally when people—like in groups—group work is just—it's anxiety-provoking in that you're worried about being kind of like consumed by

> the group and losing yourself or not being included. So those two things create anxiety so you have to kind of deal with that and push through that to focus on the learning.

As a self-authored knower in the final stage of transition (Stage 4(3)), Sara struggled with feeling like she might lose herself or become "consumed by the group." Her current way of knowing and the pull to protect an almost-formed, somewhat newly discovered self could influence her struggle to maintain her self-authorship. At the same time, she struggled with wanting to feel included in the group. These two seemingly opposite desires operating at the same time created a pull for Sara that challenged her internal state of being while she was in relationship learning with others.

The pressure Sara felt to tend to those relationships in a large group was also a challenge of learning together for Sara. She explained that when she logged in to her online course, "it tells me I have over a hundred unread posts, and that can be overwhelming, just trying to respond to everyone and build those relationships can be a little stressful." Having too many people involved in the group dynamics so that she felt she could not give them the attention they deserved was also a relational-emotional challenge for Sara.

Generative dimensions. Self-authored knowers recognized dimensions of learning alone and together that socialized knowers did not—generative dimensions. They articulated the notion that something new, different, or even riveting could come from the learning experience. Generative dimensions of learning alone and together involved creations, innovations, and results of learning that could not have been known or expected otherwise. In the self-authored knowers polarity map, generative dimensions

were only articulated as negative implications for learning alone and positive implications for learning together.

Sara described the generative downside of learning alone as lacking excitement. She thought the experience of learning alone "can be a little lackluster in that department. It's not exiting. It's not riveting." Without others to generate excitement and interest, the learning experience lacks a quality that can only come from when people are together. It is this intangible dynamic of being together that Sara describes as missing when learning alone.

On the other hand, Sara and Ben described generative qualities as upsides of learning together. Ben said:

> You can find out about things that you didn't realize were there because you've got your view of something and your colleague might say well, you're full of crap and you should take a look at this and suddenly, the sky opened up and the sunlight shone through and—and—and you've got this great revelation.

Ben went further than socialized knowers in his understanding of the benefits of sharing perspectives and ideas when learning together. Ben articulated a way that hearing another person's view held the potential to create a new revelation for him. Learning together could be generative for Ben in that he could potentially change his own perspective and gain something new. Sara described the generative potential of learning together when classmates shared ideas: "You're able to brainstorm and kind of build ideas off of each other." Similar to Ben, Sara saw potential in learning together for creating something new—in this case, ideas. Self-authored knowers recognized the

generative possibilities for learning together; this was a novel perspective not articulated by socialized knowers.

Section Summary

Polarity maps offered insights into how participants experienced support and challenge of the alone/together paradox and the dimensions that the paradox created in their learning experiences. Synthesized polarity maps revealed patterns in the dimensions of socialized and self-authored knowers' learning and the elements that made the alone/together paradox a holding environment. Socialized knowers described operational, educational, relational, and emotional supports and challenges of the paradox. Self-authored knowers described similar supports and challenges in more layered and complex ways, identifying dimensions that overlapped and related to one another so that they could not be separated in the same manner as described by socialized knowers. Self-authored knowers also identified generative dimensions to learning that were present when learning together and not present when learning alone. The alone/together paradox presents varied and qualitatively different supports and challenges and creates a holding environment for both socialized and self-authored knowers.

Summary

This chapter presented the findings of this study, organized into three sections according to the three research questions guiding this inquiry. First, participants' developmental stages shaped their online learning experiences in three distinct ways. Socialized and self-authored knowers held different values for online learning and outcomes. Socialized knowers valued instrumental learning and measurable outcomes, while self-authored knowers valued learning for learning's sake and unknown outcomes.

Also, socialized knowers understood the online instructor's role as guru, while self-authored knowers understood the online instructor's role as Sherpa. Finally, socialized knowers experienced and mitigated uncertainty in the online learning environment through time, text, and peers. Data in this study did not support a finding for self-authored knowers' experiences of uncertainty in the online environment. These three findings, taken together, suggest that socialized and self-authored knowers experience online learning in ways that reflect their developmental stages.

Second, participants at different developmental stages described and understood the alone/together paradox in the online learning environment with varying complexity. Socialized knowers functioned within the alone/together paradox but did not recognize it as such. They enacted their subjectivities by tending toward aloneness through dismissing, tending toward togetherness through connecting, or just beginning to engage the paradox unconsciously through masking. Self-authored knowers saw the alone/together paradox and understood their experience through disembodiment. They sought to navigate the paradox by consciously constructing reality, practicing vulnerability, and recognizing limits.

Third, an online educative space may foster developmental shifts that will help adults meet the unique demands of online learning by acting as a holding environment that provides support and challenge. The alone/together paradox provided the structure for participants to experience support and challenge in various dimensions of their learning. Polarity maps revealed patterns in how socialized and self-authored knowers described these dimensions with various layers of complexity. Socialized knowers identified support and challenge through operational, educational, relational, and

emotional dimensions of their learning. Self-authored knowers identified similar dimensions and named them in combination with one another, understanding them as overlapping and connected rather than separate. In addition, self-authored identified a generative dimension of learning together that was absent when learning alone. Each of these dimensions of the alone/together paradox presented different supports and challenges, in different degrees, to create a holding environment for socialized and self-authored knowers in the online context.

CHAPTER 5

CONCLUSIONS AND IMPLICATIONS

The seeds of this inquiry into adults' online learning experiences were planted several years ago, when I was taking a class on adult learning with Dr. Nicolaides. One of our assignments toward the end of the course was a TED-style presentation that offered us the space to explore a topic of our choosing in relationship to an adult learning theory we had discussed in the class. I remember Dr. Nicolaides asking the class, "What are you passionate about?" This question both terrified and excited me. At the time, I was in the middle of reading Turkle's (2011) book about our relationships with technology and becoming more fascinated and inspired, page after page. Turkle (2011) writes about the seductive quality of connecting through technology, rather than in person, and the effects this has on our capacities for expression, intimacy, and solitude. I felt this deeply in my own life. Since the advent of text messaging and social media, I continue to find myself speaking and interacting with friends, colleagues, and family less face-to-face and more via technology. Although efficient and convenient, I simply do not receive the same kind of satisfaction from connecting digitally as I do from connecting in person. Something is missing. This is also true of my learning. In graduate school I took three online courses where I never once saw my classmates in person and only interacted with them through words and symbols on a computer screen. In these online interactions I did not feel as interested in my classmates or as engaged in the discussion, and I found myself wishing for the "human connection" that learning in a physical

classroom can bring. Turkle's work brought to light a phenomenon I knew I wanted to study but could not quite make sense of how.

Winston Churchill (1943) proposed that "we shape our buildings; thereafter, they shape us." I would argue the same could be said of the research process. At the same time I began to study what technology meant for the way we learn, I began to fall in love with Kegan's (1982, 1994) constructive-developmental theory. Studying adult development in theory and applying it to my own life was transformative in and of itself. I began to realize small shifts in the ways I saw and knew the world. As I grew, this study also evolved; likewise, as I made meaning in the data, I began to see myself anew. Perhaps nothing is more emblematic of this shift than in the way I came to see, know, and understand the alone/together paradox.

In the early stages of this study, I thought the alone/together paradox was a problem to solve, as if there was a pedagogical structure or teaching strategy that could alleviate the push/pull I felt between the efficiency of online learning and the challenges of connection. I know differently now. In exploring and more deeply understanding these participants' experiences of the alone/together paradox, I gained a better grasp and perspective of my relationship to it. I began to recognize my own struggle to balance and navigate being alone and being together in many contexts beyond that of just the online environment. As a result, in the evolution of this study, the online environment became the context for studying adults' understandings of the alone/together paradox. In this chapter I offer two major conclusions of how adults learn online and through the alone/together paradox, along with implications for theory, practice, and research.

Summary of the Study

The purpose of this study was to understand how adults construct meaning, develop, and grow within the context of an online, structured, educative space. Three research questions guided this study. First, how does an adult's developmental stage, or way of knowing, shape his or her online learning experience? Second, how do adults at varying developmental stages describe and understand the alone/together paradox in the online learning environment? Third, how, if at all, may an online educative space foster developmental shifts that will help adults meet the unique demands of online learning? This study was a qualitative case study of seven adults, spanning development between socialized (Stage 3) and self-authored (Stage 4) orders of mind, who had taken an online course that used transformative learning or developmental pedagogical structures. Data were collected through Subject-Object Interviews (Lahey, Souvaine, Kegan, Goodman, & Feliz, 1988), semi-structured interviews, and individual polarity maps (Johnson, 1992). The data were analyzed using grounded theory methods (Charmaz 2000, 2011, 2014). From this analysis of the data, six major findings emerged.

The first, second, and third findings answered research question one. They were that socialized and self-authored knowers held different values for online learning and outcomes, socialized and self-authored knowers held different views of the online instructor's role, and socialized knowers experienced and mitigated uncertainty in the online learning environment. The fourth and fifth findings, which answered research question two, were that socialized knowers functioned within the alone/together paradox and self-authored knowers saw the alone/together paradox. The sixth finding answered

research question three and was that the alone/together paradox was a holding environment for socialized and self-authored knowers.

Conclusions and Implications

I drew two main conclusions from this study. The first conclusion is that the online learning environment is a catalyst for growth and development, for those who are ready, by virtue of manifesting the alone/together paradox. As a holding environment, the alone/together paradox provides high support and high challenge for socialized and self-authored knowers. The paradox can be a transformative learning space that is unique to the online context and not necessarily available in traditional face-to-face classrooms. The potential for growth in the online environment exists in how adults can engage the paradox. For socialized knowers who were subject to the paradox, a frontier for growth is in how they can meet the challenge of *being alone.* This frontier, or growth edge, can foster development that helps socialized knowers meet the ontological and epistemological demands of online learning environments.

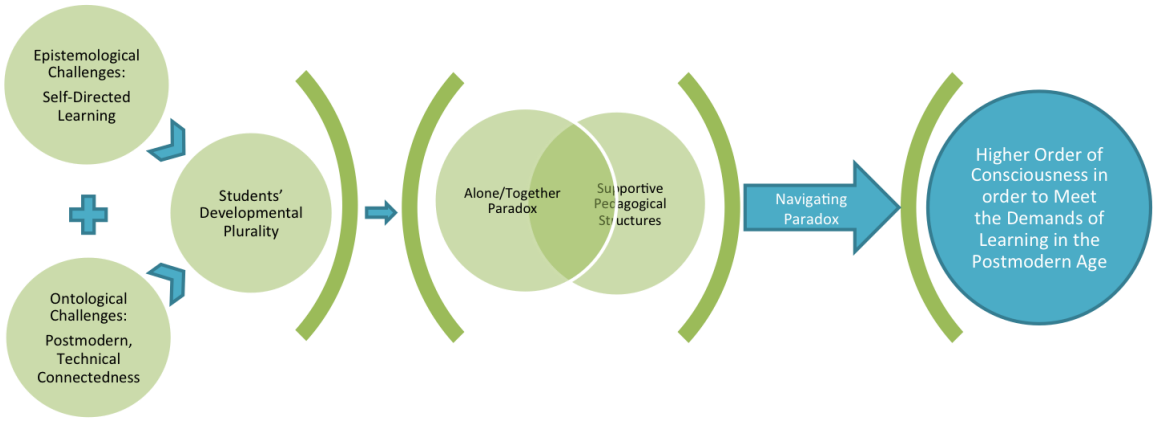
The second conclusion is that *generative learning through knowing together* is a framework for self-authored knowers to engage the complexity of the alone/together paradox. Based on existing research and the findings of this study, online pedagogy successfully fosters instrumental and transformative learning. In this study, the conditions were not available for participants to experience generative learning; however, given the ambiguity of the online environment and the social presence possible, two structures may support generative learning online: the alone/together paradox and conversation. This conclusion explores the growth edge of self-authored knowers with generative learning through knowing together.

The Online Learning Environment is a Catalyst for Growth and Development

I began this inquiry exploring the kinds of deliberate pedagogical structures that would promote transformative learning, and possibly development, in online courses. I initially thought that to study development in the online context, I would need to look at online courses that employed deliberately developmental or transformative learning practices. I was interested in how instructors operationalized or functionalized theories of development and transformative learning and translated them for the online classroom. The literature supported this line of inquiry. The current literature on transformative learning in online courses points to several conceptual models designed to perpetuate shifts in perspectives or foster new ways of thinking, often through particular pedagogical interventions (Smith, 2012). A subset of this literature explores teaching practices and curriculum design as catalysts for transformative learning, such as course readings, assignments, and dialogue with classmates (Arroyo, Kidd, Burns, Cruz, & Lawrence-Lamb, 2015; Forte & Blouin, 2016; Keegan, 2011; Provident et al., 2015). While much attention has been paid to how to facilitate transformative learning online, current research does not explore the online environment, in and of itself, as potentially transformative. I had not considered this possibility and was surprised when it emerged from the data. The findings of this study reveal that deliberately developmental structures and transformative learning teaching practices are not the only catalysts for growth in online courses. The alone/together paradox is itself a developmental structure that already exists in the online environment. Based on this conclusion, the conceptual framework initially guiding this study can be slightly reimagined to include the

alone/together paradox as an online holding environment and navigating paradox as a means for facilitating a developmental shift (see Figure 5.1).

Figure 5.1



Reimagined Conceptual Framework

Alone and together. Being alone and together reflects the way we understand our fundamental need for separateness and togetherness. Human beings have a double drive toward autonomy and homonymy, independence and belonging, agency and communion (Angyal, 1941, 1965; Bakan, 1966). Like all polarities, we understand autonomy in contrast to homonymy and homonymy in contrast to autonomy; one side of the paradox defines the other. Of the alone/together paradox, Perel (2006) explains:

> Our need for togetherness exists alongside our need for separateness. One does not exist without the other. With too much distance, there can be no connection. But too much merging eradicates the separateness of two distinct individuals. Then there is nothing more to transcend, no bridge to walk on, no one to visit on the other side, no other internal world to enter. When people become fused—when two become one—connection can no longer happen. There is no one to connect with. Thus separateness is a precondition for connection. (p. 45)

Perel (2006) posits that for the health of our relationships and connections with each other, we must find a way to fulfill our mutual needs for togetherness and separateness. Too much connection, over time, and we lose our selves; too much disconnection and we lose our capacities for intimacy, empathy, and conversation (Perel, 2006; Turkle, 2011, 2015). Technology distorts these mutual and competing needs, providing false comfort in technical connections and ultimately depriving us of true solitude and authentic togetherness (Turkle, 2011, 2015). Through technology, "we hide from each other even as we're constantly connected to each other" (Turkle, 2015, p. 3). Our relationships with technology and our experiences online shine a light on the paradox and, for those who are ready, force us to consider more consciously our basic human need for being alone and together.

Participants' experiences of the alone/together paradox in this study reflected this double drive toward independence and belonging. While both socialized and self-authored knowers expressed their needs for both, their capacity for holding both (consciously and unconsciously) varied. This is in line with developmental theory that suggests how we balance these needs is negotiated differently by individuals at each stage of development (Kegan, 1994; Sharma & Cook-Greuter, 2010; Berger, 2012). Socialized knowers' enactments of the paradox suggested they were subject to it and could not easily or sustainably hold their need simultaneously for independence *and* belonging. The phenomena of dismissing and connecting were overt choices socialized knowers made between being alone and being together in the online environment. Choosing between two poles of a polarity, one or the other, happens at every developmental stage, and we often consciously or unconsciously embrace one pole,

unaware of what we are excluding in the other (Sharma & Cook-Greuter, 2010). When participants described embracing dismissing and connecting, they were excluding the experiences of communion and agency, respectively.

Socialized knowers beginning the transition to self-authorship, or those in stage 3(4), described masking as an opening into the experience of the paradox. Leigh and Cherita neither excluded nor embraced being alone or being together in masking. Rather, they sought a way to straddle the threshold of both by protecting their selves and their autonomy while being connected to their classmates. Despite dancing between both sides of the paradox, they did not consciously recognize it as such. Masking was a behavioral reaction to the subconscious recognition of the increased complexity of the online environment. Masking was also a signal of a growing edge for socialized knowers, which I discuss in the next subsection.

Self-authored knowers' enactments of the paradox suggested they were aware of it and its challenges and attempted to navigate them. Disembodiment described the self-authored knowers reaction to being alone and together; rather than embrace one pole or the other, they felt the effects of being connected through the digital divide in a way that brought their attention to the paradox. They understood that collectively they were each alone, and individually they were each connected. Further evidence of their awareness of the paradox was attempts to deliberately navigate it through consciously constructing reality, practicing vulnerability, and recognizing limits. Although they saw the paradox, self-authored knowers could not engage it differently once they recognized the limits of what they were currently doing. In this sense, they were stuck in a single-loop learning pattern in their attempts to improve their performance in navigating the paradox (Argyris

& Schön, 1974). Their capacity for seeing the alone/together paradox in the online environment did not translate into transcending the paradox; I explore a growing edge for self-authored knowers in the second conclusion.

The self-authored knowers' capacity for seeing the alone/together paradox and the socialized knowers' blindness to it supports theoretical assertions that development shapes how we understand paradox (Kegan, 1994; Sharma & Cook-Greuter, 2010; Berger, 2012). One's capacity for holding a "paradox cognition" (Smith & Lewis, 2011) and integrating and transcending interdependent opposites (Sharma & Cook-Greuter, 2010) increases as we grow. "At the highest level of [measurable ego] maturity…one simply witnesses the dance of opposites as one understands their universal nature" (Sharma & Cook-Greuter, 2010, p. 24). The alone/together paradox is one that reflects the universal, fundamental human need to be both independent and part of something bigger than us.

Humans experience the push/pull of separateness and belonging in many contexts well beyond their interactions with technology and in the online classroom. However, the online classroom may act as an incubator for growth, where adults can reliably experience and experiment with the alone/together paradox. In this way, the paradox presents an opportunity for development that is unique to the online environment and may, if ready, bring it to one's consciousness while navigating through it. This particular polarity, given the current milieu of higher education and our technically connected world, is a ripe container for growth.

Growing through paradox. As a holding environment that provides both support and challenge, paradox in general can be a structure for growth and development

(Sharma & Cook-Greuter, 2010; Berger, 2012; Emerson, 2013). For example, the socialized form of mind is characterized by one's embeddedness in others' perspectives and opinions; when two or more of these perspectives conflict, the individual may experience it as internally wrenching. However, recognizing that both perspectives of his or her trusted allies may be true and experiencing the paradox of two competing but equally important values can create the conditions for a new perspective or frame of reference to emerge. Likewise, for socialized and self-authored knowers, when beloved theories or beliefs that guide an individual's work seem to rub against one another, the resulting confusion and disorientation can facilitate a kind of mental flexibility around complex issues. "Taking new theories and putting them together—especially theories, practices, or ideas that are contradictory—gives us practice in holding the paradoxes of what it means to be human" (Berger, 2012, p. 93). Paradox is everywhere, and how adults engage it can catalyze their growth and development.

Becoming aware and seeing paradox is the first step toward being able to use it as a catalyst for development. Integrating polarities that individuals are consciously or unconsciously expressing can support growth (Sharma & Cook-Greuter, 2010). Sharma and Cook-Greuter (2010) go so far as to say, "harmonizing these critical transition polarities provides optimal leverage for vertical development" (p. 26). In this study, the alone/together paradox presented itself as a critical transition polarity for socialized knowers just beginning a transition into self-authorship, or those at a developmental stage 3(4). This aligns with constructive-developmental theory, which characterizes the shift from the socialized stage to the self-authored stage as a move away from communion and toward autonomy (Kegan, 1982, 1994; Berger, 2012). This is particularly critical given

that 46 percent of the adult population makes meaning at a socialized form of mind or between a socialized and self-authored form of mind (Berger, 2012). The potential for impact among adults making meaning in the alone/together paradox is great.

Masking. The socialized/self-authoring midzone begins when the socialized mindset is not spacious enough to accommodate the complexity of its context or surroundings (Berger, 2012). Study participants in this midzone felt the complexity of the alone/together paradox, even though they could not clearly see it. The trigger of this complexity manifested as masking, a phenomenon where they used the online environment to both hide and reveal the self in order to manage the felt liminal state of being alone and together. Masking was an enactment of participants' growth edge—that is, the meaning structure just at the frontier of an individual's consciousness and awareness (Berger, 2012). Growth edges signal the boundaries of individuals' understandings and the biggest perspectives they can take. The growth edge for socialized knowers in this study, and in the alone/together paradox, was awareness that they could potentially reveal another self in the online environment.

Through masking, participants used anonymity to begin shedding their previously embedded selves. The anonymity of the online environment emboldened them to reveal something they couldn't in a face-to-face learning environment. They were no longer embedded in relational and social structures that define their socialized selves. Without these defining structures they could more safely experiment behind a mask of a new, emerging self. During a follow up member check, Leigh confirmed that masking was reflective of her online learning experience, and that it allowed her to play with her own, newly emerging identity. She shared, "[Masking] kind of gives me a chance to remake

myself into someone that I couldn't be in a face-to-face setting." By allowing individuals in the early socialized/self-authored midzone the opportunity to explore an identity not seen or constructed by others in the online environment, masking may facilitate an emergence into a more self-authored way of knowing, prompted by the conditions created within the alone/together paradox.

Inferences made from participants' polarity maps also revealed growth edges in socialized and self-authored knowers' development. These frontiers in meaning making are not necessarily object for individuals, as they were when participants described masking. Individuals can be (and are often) subject to their own growth edges. The polarity mapping exercise during participant interviews was critical in making these subjectivities object, thereby revealing additional growth edges in the alone/together paradox. For socialized knowers, the growth edge was a felt sense of *being alone*; this growth edge helped participants address the epistemological and ontological demands, or challenges to knowing and being, of online learning.

Being alone. The polarity map analysis revealed that Cherita and Leigh, socialized knowers just beginning transition to self-authorship, experienced the aloneness of learning through an emotional quality they were able to access through feeling, rather than cognition. They were the only two participants of the socialized knowers who named emotional downsides to learning alone. For Cherita and Leigh, this felt sense of being alone in the paradox was also a growth edge. The feeling Cherita described as being "out there and off the cliff with no net" signaled an emergence from her current culture of embeddedness (Kegan, 1982). Her recognition that this feeling could potentially lead to "shutting [herself] down" spoke to the precarious nature of this

transition and the crucial importance for the current culture of embeddedness, or holding environment, to "stick around" (Kegan, 1982) as she moved into new transitions of development. The isolation participants described as the felt sense of being alone in the paradox has the potential to foster a developmental shift for socialized knowers. Being alone is a budding understanding and glimpse into the transition from the socialized state of being embedded in others to the self-authored state of cohering an independent self.

The alone/together paradox can be a container out of which a self-authored self may emerge. The epistemological and ontological challenges of simultaneously learning alone and learning together in the online environment demands capacities for self-directed learning and navigating paradox, two capacities which self-authored knowers may hold but socialized knowers may not (Kegan, 1994; Sharma & Cook-Greuter, 2010). When socialized knowers in the midzone begin to feel the tension of the paradox through being alone, they begin to grow their perspective to consciously consider and see the paradox, thereby more effectively meeting the complexity of the online context.

Suffering and seeing paradox. Experiencing paradox can create anxiety, tension, and feelings of being torn in two different directions (Kegan, 1982; Berger, 2012). Participants in this study described their experiences of comfort and discomfort while being in the alone/together paradox of online learning. Emerson's (2013) grounded theory study of the polarity mapping process found that groups either suffer paradox or navigate paradox. Without a sense-making tool that facilitates the move from being subject to the paradox to being able to see and hold the paradox as object, groups often suffer the paradox. Suffering paradox follows a sequence of understandings that leads to destructive tension (Emerson, 2013). The findings of this study suggest that individuals

may also suffer paradox when they are subject to it, as socialized knowers were, and experience similar understandings. Socialized knowers in this study experienced the first two stages of suffering paradox, "preferencing," "a natural instinct to gravitate towards one of the poles" (Emerson, 2013, p. 47) and "attaching," when individuals are "tied to their way of seeing things" (Emerson, 2013, p. 47). Early socialized knowers expressed attachment to the alone pole often in order to go faster and more efficiently through their studies; at the same time, early socialized knowers expressed attachment to the together pole in order to have support to further completion of their studies. Preferencing and attaching signaled these individuals were suffering paradox.

When individuals see paradox rather than suffer it, they can realize the ways they had once been subject to it; rather than being "had by" the alone/together paradox, they can "have it" (Kegan, 1994). Seeing paradox is the first step in liberating unseen and unexamined habits of mind. By recognizing two interdependent poles exist and the preferences we hold for one or the other, we can move toward action.

> Becoming aware of the wisdom and benefits of the less valued pole of a polarity can be a powerful means to expand one's perspective…It allows one to make new meaning by having greater choice and more power to explain a situation than privileging one side of a polarity over the other. (Sharma & Cook-Greuter, 2010, pp. 24-25)

Seeing polarity is the first step toward managing the complexity of paradox (Johnson, 1992). In this study, self-authored knowers had the capacity for recognizing the complexity of being alone and together, evinced by their naming it and describing it through descriptions of disembodiment. They also began to move toward action through

navigating paradox, albeit without a formalized sense-making process. Emerson (2013) advocates using tools to facilitate a subject-object move that will help individuals and groups manage the complexity of paradox. I suggest two tools in the following subsection to help individuals at both the socialized and self-authored stages navigate the alone/together paradox in the online environment to grow perspective and support development.

Navigating paradox. How individuals perceive paradox ultimately impacts how they will capitalize on the energy that flows between two poles of a polarity (K. K. Smith & Berg, 1987; W. K. Smith & Tushman, 2005; Emerson, 2013). Two processes that can help individuals harness this energy are polarity mapping (Johnson, 1992) and Immunity-to-Change mapping (Kegan & Lahey, 2009). Johnson's (1992) polarity mapping process makes the paradox that individuals or groups are embedded in, or the unconscious polarities they are holding, conscious. Polarity mapping involves defining the value of two poles, describing the upsides and downsides of both, and ultimately recognizing the interdependent nature of paradox. This sense-making process can help individuals see paradox in a positive manner (Emerson, 2013). Instructional designers could use polarity mapping as a group exercise in online courses to bring the alone/together paradox to light, help individuals identify their preferred pole, and co-create ways to creatively harness the developmental potential of the environment and navigate through the paradox.

Kegan and Lahey's (2009) Immunity-to-Change method also facilitates a subject-object developmental move in individuals. In the Immunity-to-Change exercise, individuals uncover a competing or hidden commitment that they hold in relationship to

an improvement goal to which they are equally committed. Kegan and Lahey refer to this relationship as "having one foot on the gas and one foot on the brake" (personal communication, February 17, 2016). They use the power of once being subject to the polarity to now seeing it and, perhaps one day, holding the polarity as object to enact a shift in perspective. The Immunity-to-Change mapping process could be helpful to individuals holding an overt preference for one pole of the alone/together polarity and an unconscious preference for the other pole. For socialized knowers practicing dismissing or connecting, where overt preferences are clear, the Immunity-to-Change process could be especially powerful. These two sense-making processes are tools that adult educators could use to explicitly explore the alone/together paradox and foster development.

Implications. The online environment as a catalyst for growth and development, by way of the alone/together paradox, has implications for practice, theory, and research. To date, practitioners of online teaching and learning have attempted to create the conditions for transformation by adapting face-to-face transformative pedagogy to the online environment (Merriam, 2004; Meyers, 2008; Smith, 2012). As technology evolves, along with our relationships to it, instructional designers have been engaged in single-loop learning (Argyris & Schön, 1974)—that is, they have been focused on improving the performance of the online environment and the outcomes for transformative learning by optimizing traditional pedagogical structures in online courses. Smith (2012) encourages instructors to rethink their roles to deliberately take advantage of the online context in transformative learning. This study offers empirical evidence of a developmental structure inherent in the environment and reflective of our ways of knowing and being in the online context: the alone/together paradox. This

finding calls for a figure-ground shift (Nicolaides, 2008) or double feedback loop (Torbert & Associates, 2004) with regards to how instructional designers and instructors foster development online. Rather than rely on pedagogical structures that are adapted *to*, layered *on*, or implemented *in* the online environment, the alone/together paradox offers a structure *of* the online environment that may also catalyze transformative learning and development.

From a theoretical perspective, this study extends the theory of suffering paradox and navigating paradox (Emerson, 2013) to include a developmental perspective. Socialized and self-authored knowers experienced paradox differently; socialized knowers experienced elements of suffering paradox, while self-authored knowers experienced elements of navigating paradox. Sharma and Cook-Greuter (2010) theorize that an individual's developmental stage influences how he or she experiences paradox. This study offers empirical data for how adults between Stages 3 and 4 suffer and navigate the alone/together paradox.

Additionally, this study contributes to and extends constructive-developmental theory. This study contributes to Kegan's (1982, 1994) theory by applying it to adults' ontological and epistemological experiences in the online learning environment. The alone/together paradox of technical connectedness provided support and challenge to foster a shift from Stage 3 to Stage 4, from functioning within the system to seeing the system. This study also extends constructive-developmental theory by providing evidence that the context itself can be developmental. Kegan (1994) argues that adults need to attain later orders of mental complexity before they can meet the demands and complexities of our context. Specifically in learning, he argues adults must meet the

demands of self-directed learning with a self-authored way of knowing. Yet the participants in this study who were "in over their heads" (Kegan, 1994) in the online context experienced the very nature of the context as transformative. In this study, the self-directed demands of being alone were a catalyst for development for socialized knowers and the self-transforming demands of knowing together (discussed in the next section) were a catalyst for self-authored knowers. Kegan's frame on self-directed learning is limiting in that it does not acknowledge that the demands of the context can push adults developmentally to grow their perspectives toward a later stage of development. The findings of this study suggest that adults can meet the demands of the context by experiencing its nature as a holding environment, even before they have the requisite order of mind to do so.

The alone/together paradox is also a rich and multi-dimensional area for research. First, polarity mapping as a methodological tool for data collection and analysis yielded another entry into participants' structures of meaning. That is, the polarity maps revealed elements of the paradox to which participants were subject both as individuals and also as a collective representation of their developmental stage, namely the emotional dimensions of being alone and the generative dimensions of knowing together (discussed in the second conclusion). Second, the online learning environment as a catalyst for growth and development opens new lines of inquiry for future research. How do online instructors experience the alone/together paradox, and how, if at all, does this translate into their online curriculum? How do sense-making tools like polarity mapping (Johnson, 1992) and Immunity-to-Change (Kegan & Lahey, 2009) influence adults' experiences of the alone/together paradox in the online environment? What are other

structures *of* the technical environment or structures inherent in our ways of being and knowing with technology, outside of the alone/together paradox, that foster transformative learning and development? Third, paradox as a structure of development also warrants future research. Adults' experiences of paradox in other contexts and its role in their growth and development is a wide open and crucial area of inquiry that can aid adults in meeting the demands of 21st century learning and living.

Generative Learning through Knowing Together

Adults at the socialized and self-authored stages of development in this study (which are also the developmental stages of the vast majority of the adult population) recognize and may choose to engage in instrumental and transformative learning in the online environment. Additionally, self-authored knowers identified a different kind of learning—generative learning—as possible through knowing together. The conditions for *generative learning through knowing together* were not present in participants' experiences of the online environment in this study. However, given the ambiguity generated by the alone/together paradox, conditions may be possible for adults in later stages of development to engage in generative learning in the online context. This is the second conclusion of this study. Based on the findings, the online environment offers multiple kinds of learning to adults to experience based on their capacity for complexity and their readiness and ripeness for transformation and development.

Instrumental learning online. Instrumental learning reflects the ability to acquire technical knowledge and skills in a task- or action-oriented manner to solve problems (Habermas, 1984). With instrumental learning, emphasis is often placed on determining cause and effect relationships and improving prediction and performance

(Habermas, 1984; Mezirow, 1991). In this study, socialized knowers found the online environment very conducive to instrumental learning. They expressed their intentions and abilities to directly translate the skills and tools they learned in the classroom to tasks and responsibilities they faced in the workplace. They valued the usefulness and practicality of hearing their classmates' experiences, citing ways that hearing others' perspectives and suggestions helped them solve their own problems. Instrumental learning was less important to self-authored knowers, although they identified positive attributes of being able to take advantage of others' knowledge and the instructors' expertise.

Early models of computer-based and online learning have long supported instrumental learning and the one-way delivery of information by focusing mainly on asynchronous group and individual messaging, access to course materials, and real-time interactive events (Mason, 2001). Likewise, both poles of the alone/together paradox of the online environment, as understood by socialized knowers, generate conditions for instrumental learning. Specifically, participants appreciated the freedom and flexibility that learning alone afforded them; without being hampered by others, they could quickly and efficiently digest information. Being able to effectively utilize the resources of the online classroom (Hill & Hannafin, 2001), including the ease with which they could navigate the paths to information on their own within the structures of the courses, also facilitated instrumental learning. Regarding learning together, social presence (Garrison, Anderson, & Archer, 2000) created conditions for instrumental learning through the phenomenon of connecting, an act of relating with one another to meet the operational

demands of learning. The courses participants reflected on in this study clearly generated conditions for instrumental learning online.

Transformative learning online. In contrast to instrumental learning, transformative learning (Mezirow, 1991, 1994, 2000) does not predict outcomes but rather creates the conditions for shifts in perspectives and paradigms. Research on transformative learning is an increasingly large body of literature, and studying transformative learning in online environments is becoming a more popular topic of interest each year. Conceptual and empirical studies alike suggest that the conditions for fostering transformative learning exist online (Smith, 2012). This study found that the alone/together paradox could be a holding environment for transformative learning online.

Models of effective pedagogy, particularly the Community of Inquiry (CoI) model (Garrison, Anderson, & Archer, 2000), seek to support transformative learning in the online context. The CoI model incorporates cognitive, teaching, and social presence to form a community ripe for learning. Of these three factors, the external structures of teaching and social presence were very influential in participants' online learning experiences in this study, particularly among socialized knowers. Socialized knowers relied on instructors as gurus to meet the three elements of teaching presence—instructional management, building understanding within the course, and direct instruction. They also relied on social presence among their peers to navigate the uncertainty of the online environment. Participants' reflections of teaching and social presence in this study confirmed Akyol, Garrison, and Ozden's (2009) findings that social presence is developed through self-disclosure and that a strong and active teacher

presence that takes place at the beginning of will foster a sense of connectedness and learning an online course. The CoI model, useful for supporting transformative learning online, appeared to be more relevant to socialized knowers' experiences in online courses than those of self-authored knowers. One explanation from the developmental perspective could be that self-authored knowers are less reliant on external structures for navigating their learning experiences.

It is important to note that while it is possible for teaching practices to foster transformative learning, the individual must be ready and the conditions ripe for transformation (Cranton & Taylor, 2012). Also, even when precursors to transformative learning are present, an experience of transformation is not guaranteed. It is up to the individual to continue the process of reflecting and revising his or her assumptions for a new habit of mind or way of making meaning to be sustained (Kegan, 2000; Mezirow, 2000). Given the uncertainty of promoting transformation even when instructors use deliberately developmental practices or all three elements of the Community of Inquiry model are present, the permanence of the alone/together paradox in the online environment is encouraging. Using the alone/together paradox as a developmental structure, coupled with supportive pedagogical practices that encourage recognition and reflection on the paradox, is a way to integrate the technical environment and navigate the online context.

Generative learning online. In this study, the self-authored knowers at Stage 4(3) and Stage 4 were aware of a kind of learning that was possible when learning together and that was lacking when learning alone. They articulated a generative dimension of learning as producing new, unexpected, and co-created knowledge that

came from valuing and understanding others' perspectives in such a way that they allowed them to form and shape new perspectives. In contrast to participants at earlier stages who valued their colleagues' perspectives for their usefulness and application, self-authored knowers valued others' perspectives for the potentially new learning that could be generated between and among their interactions. I am calling this particular form of learning *generative learning through knowing together*.

Theorists and poets alike have conceptualized generative learning. Bateson (1973) describes generative learning as Level III learning, a higher order learning that involves the "double involvement of primary processes (corrective action) and conscious thought (epistemic evolution)" (as cited in Brockman, 1977, p. 61). In other words, the capacity for generative learning requires a willingness to engage in instrumental and transformative learning in order to realize a developmental shift. Torbert (2004) theorizes generative learning as a "reframing spirit" and Nicolaides (2008) articulates it as a "figure-ground shift." In each of these conceptualizations, development through generative learning involves the letting go of a coherent, self-authored self and surrendering to a yet-to-be-known, transformed self. Nicolaides (2008, 2015) found *generative learning within ambiguity* among adults with post-conventional (Stage 5 and beyond) capacities. These adults described the capacity for generative learning as a paradoxical communion with ambiguity, the ability to trust in "being held by the unknown (and possibly unknowable)" (Nicolaides, 2015, p. 13). The poet David Whyte (1997) interprets this capacity in his poem, "Working Together": "We shape ourselves to fit this world, and by the world are shaped again. The visible and the invisible, working together in common cause, to produce the miraculous" (p. 86). He describes generative

learning as the "miraculous" result of our efforts when we can bring ourselves and willingly engage with unknown or "invisible" elements in the world.

Generative learning as described by self-authored knowers in this study is "exciting," "riveting," a "great revelation," and provides the means to "build ideas off of each other." They understood generative learning as an attribute of learning together and its absence as a drawback to learning alone, but they did not describe it specifically in the online learning environment. Participants articulated the potential for generative learning during the polarity mapping exercise in their interviews. Polarity mapping is a way to bring that which is subject to the forefront of one's consciousness, or make it object (Kegan, 1982, 1994; Kegan & Lahey, 2009; Emerson, 2013). Despite the absence of the conditions for generative learning through knowing together in the online environment, the capacity for naming it was uncovered through the self-authored knowers' polarity maps.

As individuals who were in the latest stage of conventional knowing, self-authored knowers' descriptions of generative learning may be considered a pre-cursor or growing edge to the post-conventional capacities described by Bateson (1973), Torbert (1999, & Associates, 2004), Nicolaides (2008, 2015), and Whyte (1997). They experienced the phenomenon of generative learning specifically through knowing together, suggesting they were attempting to overcome the challenge of how to learn with each other in the online environment. The online context requires that adults tend to the epistemological and ontological demands placed on them; 21st century online learners are expected to have the capacities for self-direction and also manage themselves in the alone/together paradox. Self-authored knowers in this study demonstrated a capacity for

self-direction in their relationships with their instructors as Sherpa, yet they struggled through disembodiment as they navigated the alone/together paradox. These demands of online learning were not fully met by the capacities of self-authored knowers in this study and may not be by other self-authored knowers at various stages of integration. Feeling "in over their heads" (Kegan, 1994), self-authored knowers recognized generative learning through knowing together as a (conscious or unconscious) strategy to begin the experimentation of self-transformation to meet the complexity of their current context. This need to develop and grow capacity also suggests that the epistemological demands of online learning may be more complex and beyond that of self-direction. As such, knowing together provided the conditions for self-authored knowers to meet their growth edge.

Supporting generative learning online. Conditions in the online environment created by the alone/together paradox may be present for generative learning through knowing together. Nicolaides (2015) suggests complex contexts where individual and collective systems engaged in joint action and interaction are well suited for "awakening ambiguity" (p. 14) and sparking generative learning. Participants in this study felt the ambiguity of the online environment as uncertainty (socialized knowers) and disembodiment (self-authored knowers). Fostering joint action and interaction in the online environment may awaken the dormant ambiguity in socialized and self-authored knowers' consciousness, in service of generative learning. Findings of this study point to two possible strategies for supporting generative learning online.

One strategy for sparking generative learning through joint action is to bring the dynamics of the alone/together paradox into the forefront of online learners'

consciousness. The potential for generative learning in the alone/together paradox rests in harnessing the creative tension (Emerson, 2013) possible when individuals and groups navigate paradox. As discussed earlier in this chapter, polarity mapping (Johnson, 1992) and the Immunity-to-Change exercise (Kegan & Lahey, 2009) are tools for seeing and navigating paradox. Although the theory of navigating paradox follows a series of pre-defined steps in order to see the paradox, Emerson (2013) acknowledges that creative tension may emerge at multiple points during the process of navigating paradox. Creative tension combines a collaborative mindset, positive energy, connection to others, and dynamic synergy, somewhat akin to Csikszentmihalyi's (1975) flow state. The collaboration, connection, and synergy of creative tension echo self-authored knowers' descriptions of generative learning through knowing together. "The positive impact of Creative Tension on a group cannot be overstated" (Emerson, 2013, p. 69). Generative learning could be an expression of the creative tension possible when navigating paradox (Emerson, 2013).

Another strategy to foster generative learning through knowing together is to provide the conditions for authentic conversation and collaboration. Turkle (2015) advocates for space that allows for the kinds of conversations that foster "intellectual serendipity" (p. 245) and support "the alchemy of students…that lead to a new idea" (p. 244). The serendipitous and alchemic nature of learning that occurs when students have genuine conversation is characteristic of generative learning (Bateson, 1973, Torbert, 1999, Torbert & Associaties, 2004, Nicolaides, 2008, 2015). Turkle's (2015) work focuses on how technology can get in the way of this kind of learning. Her undergraduate students often collaborate over group chats and online document sharing

in order to complete tasks and assignments in the most efficient manner. However, Turkle (2015) finds that generative learning happens in conversations that take a turn or go in a different direction to spark a new idea. "Gchat and Google Docs get the job done by classical 'productivity' measures. But the value of what you produce, what you 'make,' in college is not just the final paper; it's the process of making it" (Turkle, 2015, p. 244). She also points out that not every conversation will be generative, but "you have to show up for many conversations that feel inefficient or boring to be there for the conversation that changes your mind" (Turkle, 2015, p. 245).

Fostering conversations in the online classroom can be challenging, given the technical limitations of the environment and socialized knowers' value for instrumental learning and measureable outcomes. However, the means and capacity for communicating with one another through various technologies continues to expand. Participants in this study highlighted the interactions they had via video chats as moments when they made more authentic connections with their classmates than in purely text-based learning environments. Offering space and time for many conversations through multiple forms and technologies—without specific, prescribed outcomes or tasks to complete—could create more robust conditions for generative learning to emerge.

Implications. The implications for generative learning through knowing together have significance for practice, theory, and research. The practical implications involve creating conditions for self-authored knowers to make the transition to the self-transforming or post-conventional stages of development. David Whyte (2011) tells us "there is no self can survive a true conversation" (12:17), and many attempts may be required before adults have the kind of conversation that will offer something new

(Turkle, 2015). For adult educators and instructional designers, in both online and face-to-face learning environments, including conversation in the curriculum to foster generative learning through knowing together could support self-authored knowers' development.

Generative learning through knowing together also offers contributions to transformative learning theory. Generative learning through knowing together addresses the critique of Mezirow's (1991, 1994, 2000) transformative learning theory that it is too focused on individual transformation to the neglect of learning with others (Wilson, 1993). Generative learning through knowing together situates the potential for transformation in relationship with others; this is especially conducive for development from self-authorship into post-conventional stages of meaning making (Smith, 2016).

As a potentially new form of learning for the online environment and a growth edge for self-authored knowers, the implications for future research around generative learning through knowing together are exciting. Future studies that explore 1) the conditions under which the alone/together paradox fosters generative learning through knowing together online and 2) the opportunities for adults to consciously explore generative learning through knowing together, through conversation and otherwise, could offer findings that increase adults' capacities for meeting the demands of their work and lives (Nicolaides & McCallum, 2014).

Final Thoughts

Adult learning in the online context is a fascinating and complex area of study. We are so young in our understandings of technology and our relationships to it that our maturation process will be a living inquiry. Turkle (2011) reminds us that just because

we grew up with the Internet doesn't mean the Internet is all grown-up. Our technical environments continue to evolve and as such, this study represents a snapshot in time. The alone/together paradox may be a current structure to explore development, but new structures will surely emerge as we integrate the existing ones. It is both humbling and encouraging to realize what may be true of our technical environments today may not be true tomorrow. At least for the moment, the alone/together paradox provides us with conditions to learn and grow, and the online environment provides us a robust context to do so. I want to move forward in my own relationship with technology and online spaces with a reflective spirit, continually learning with and through the alone/together paradox and other developmental structures that emerge from our technical world. Kegan's (1982) words echo in my head, "for we are not our stages; we are not the self who hangs in the balance at this moment in our evolution. We are the activity of this evolution. We compose our stages, and we experience this composing" (p. 169). We are the movement of our developmental journeys. What a rich and beautiful moment we are in to fully engage this movement and dance with the paradox of alone and together online.

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Appendix A

Subject-Object Interview Protocol

ADMINISTERING THE SUBJECT-OBJECT INTERVIEW

MATERIALS:	Ten (10) subject cards (3" x 7") pencil; tape recorder and ninety (90) minute tape
PREPPING THE SUBJECT:	Subject needs to know he/she: (a) is participating in a 90minute interview (b) the goal of which is to learn "how you think about things," "how you make sense of your own experience," etc. (c) doesn't have to talk about anything he/she doesn't want to.

PART I: Generating Content: The Inventory

The subject is handed the ten (10) index cards.
Each card has a title printed on it, to wit:

1. ANGRY
2. ANXIOUS, NERVOUS
3. SUCCESS
4. STRONG STAND, CONVICTION
5. SAD
6. TORN
7. MOVED, TOUCHED
8. LOST SOMETHING
9. CHANGE
10. IMPORTANT TO ME

The subject is told that the cards are for his/her use only, that you won't see them, and that he/she can take them with him/her or throw them away after the interview. The cards are just to help the subject jot down things we might want to talk about in the interview.

The subject is told, "We will spend the first 15-20 minutes with the cards and then talk together for an hour or so about those things you jotted down on the cards which you choose to talk about. We do not have to talk about anything you don't want to talk about."

(1) "Now let's take the first card" (ANGRY)
"If you were to think back over the last several weeks, even the last couple months, and you had to think about times you felt really angry about something, or times you got really mad or felt a sense of outrage or violation-are there 2 or 3 things that come to mind? Take a minute to think about it, if you like, and just jot down on the card whatever you need to remind you of what they were." (If nothing comes to mind for a particular card, skip it and go on to the next card)

(2) (ANXIOUS, NERVOUS)
" ... if you were to think of some times when you found yourself being really scared about something, nervous, anxious about something... "

(3) (SUCCESS)
" ... if you were to think of some times when you felt kind of triumphant, or that you had achieved something that was difficult for you, or especially satisfying that you were afraid might come out another way, or a sense that you had overcome something... "

(4) (STRONG STAND, CONVICTION)
" ... if you were to think of some times when you had to take a strong stand, or felt very keenly 'this is what I think should or should not be done about this,' times when you became aware of a particular conviction you held..."

(5) (SAD)
" ... felt real sad about something, perhaps something that even made you cry, or left you feeling on the verge of tears... "

(6) (TORN)

"...felt really in conflict about something, where someone or some part of you felt one way or was urging you on in one direction, and someone else or some other part was feeling another way; times when you really felt kind of torn about something... "

(7) (MOVED, TOUCHED)

" ... felt quite touched by something you saw, or thought or heard, perhaps something that even caused your eyes to tear up, something that moved you... "

(8) (LOST SOMETHING)

" ...times you had to leave something behind, or were worried that you might lose something or someone; 'goodbye' experiences, the ends of something important or valuable; losses... "

(9) (CHANGE)

"As you look back at your past, if you had to think of some ways in which you think you've changed over the last few years--or, even months--if that seems right--are there some ways that come to mind?"

(10) (IMPORTANT)

"If I were just to ask you, 'What is it that is most important to you?', or 'What do you care deepest about?' or "What matters most?'--are there 1 or 2 things that come to mind?"

PART II

"Now we have an hour or so to talk about some of these things you've recalled or jotted down. You can decide where we start. Is there one card you felt more strongly about than the others? (or a few cards, etc.) ... "

(Now the probing-for-structure part of the interview begins...) (Subject keeps selecting the cards)

Appendix B

Semi-Structured Interview Protocol

Introduction

Thank you for agreeing to participate in this research study! I appreciate your time and your willingness to speak with me.

My intention during our time together is for you to be able to speak freely and openly about your learning experiences in the online course. As a reminder, I am studying the ways people construct meaning and make sense of their structured online learning experiences.

If at any time you are uncomfortable with the questions, feel free to stop the interview. The interview will last approximately ninety minutes and will be audio recorded. This interview will also be transcribed over the next few weeks, and I will send you a copy of this transcript along with my understandings of our conversation.

Before our first interview together, you signed a consent form agreeing to participate in the study and allowing me to audio record our interview. That agreement also outlined that your identity will remain confidential (by me using a pseudonym for you and me removing all identifying information from my analysis). Do you still agree to have our conversation recorded?

For one part of our conversation, you'll need a bank piece of paper and pen. Do you have that ready?

Do you have any questions before we begin? I will now turn on the audio recorder.

Background (15 mins)

1. I got to know you during our first interview, but I'd like to learn a little more about your background. How old are you? What is your educational background? Your professional background?
2. Why did you choose to take an online course?
3. What were you hoping to get out of your online learning experience?

The Learning Experience (45 mins)

I'd like to learn more about your online learning experience. For these questions, it may be easier to think about one particular online course – maybe one in which you learned the most or one that had a particular impact on you. Take a few moments and just let me know when you have one in mind.

4. What experiences stand out as most salient for you as you reflect on the course?

5. Tell me what it was like for you to learn online.
    a. What activities or assignments felt supportive to your learning and growth, if any?
    b. What activities or assignments felt unsupportive to your learning and growth, if any?

6. Tell me what it was like to learn with others in the class.
    a. Describe your interactions with the instructor.
    b. Describe your interactions with other students.

7. How would you describe your degree of connection with your classmates? When, if ever, did you experience a personal relationship in the course?

8. I've heard from other students that they can experience feelings of isolation or loneliness in an online learning environment. Does this sound familiar to you? Please say more about why or why not? Please discuss your thoughts and feeling, including personal experiences, with these situations.

9. Some students say that they are more easily able to be vulnerable and share personal experiences in an online context, compared to a face-to-face setting. Other students report finding it difficult to reveal themselves to others through the digital divide. When, if ever, were you vulnerable in the course?

Polarity Map (20 mins)

Thank you for sharing those experiences with me. I'd like to continue discussing how you view learning on your own and learning with others in the online environment. Please draw 4 quadrants on a piece of paper. Label the left side Learning Alone and the right side Learning Together. The top row is designated as positive space and the bottom row is designated as negative space. I would like for you to write your thoughts on the map and take me through the positive and negative things about each way of learning in an online context.

10. What are all the positive qualities or things about learning alone? (top left quadrant)
11. What are the negative qualities about only learning alone, to the exclusion of learning together? (bottom left quadrant)
12. What are the positive qualities about learning together? (top right quadrant)
13. What are the negative qualities about only learning together, to the exclusion of learning alone? (bottom right quadrant)
14. Looking at the map as a whole, do you have anything more you'd like to add?

15. Take me through the map you've created.
16. Now looking at each quadrant of the map again, do you think anything changes when you think about it specifically in the online context? Does anything come into sharper relief, or not seem as applicable when you think about learning alone or learning together in an online classroom?

Opinion (10 mins)

Finally, to wrap up, I have just a couple of questions to reflect on your learning in the online course.

17. How did you assess your learning during the course? Another way of saying this might be, how did you know when you'd learned something in the online course?
18. Given the opportunity to take the class again, would you prefer to do it online? Why or why not?

Conclusion

Those are all the questions I have. Thank you for sharing your experiences with me. Is there anything that I haven't asked you that you'd like to tell me about?

Thank you so much for participating in this interview. I appreciate your time and your responses.

Appendix C

IRB Approval of Protocol

Phone 706-542-3199

The University of Georgia

Fax 706-542-3660

Office of the Vice President for Research
Institutional Review Board

APPROVAL OF PROTOCOL

October 20, 2014

Dear Aliki Nicolaides:

On 10/20/2014, the IRB reviewed the following submission:

Type of Review:	Initial Study
Title of Study:	Adult Learning in a Virtual Educative Space: A Constructive-Developmental Perspective
Investigator:	Aliki Nicolaides
IRB ID:	STUDY00000605
Funding:	None
Grant ID:	None

The IRB approved the protocol from 10/20/2014.

In conducting this study, you are required to follow the requirements listed in the Investigator Manual (HRP-103).

Sincerely,

Larry Nackerud, Ph.D.
University of Georgia
Institutional Review Board Chairperson